DOCUMENT RESUME

ED 450 890 PS 029 232

AUTHOR	Lamb-Parker, Faith, Ed.; Hagen, John, Ed.; Robinson, Ruth, Ed.
TITLE	Developmental and Contextual Transitions of Children and Families: Implications for Research, Policy, and Practice. Head Start's National Research Conference (5th, Washington, DC, June 28-July 1, 2000). Summary of Conference Proceedings.
INSTITUTION	Columbia Univ., New York, NY. Center for Population and Family Health.; Society for Research in Child Development.
SPONS AGENCY	Administration for Children, Youth, and Families (DHHS), Washington, DC.
PUB DATE	2001-00-00
NOTE	798p.; For 1998 Conference Proceedings Summary, see ED 429 700.
CONTRACT	105-99-1520
PUB TYPE	Collected Works - Proceedings (021)
EDRS PRICE	MF05/PC32 Plus Postage.
DESCRIPTORS	Abstracts; Brain; Child Development; Child Health; Classroom Environment; *Context Effect; Cultural Influences; Curriculum Development; *Developmentally Appropriate Practices; Educational Technology; Family School Relationship; Language Acquisition; Measurement Techniques; Mental Health; Parent Education; Parent Influence; Parent Participation; Poverty; *Preschool Children; *Preschool Education; *Preschool Evaluation; Public Policy; Research Methodology; School Readiness; Special Needs Students; Staff Development; Student Evaluation; Teacher Student Relationship; Transitional Programs
IDENTIFIERS	Brain Development; Neurosciences; *Project Head Start; Welfare Reform

ABSTRACT

This report summarizes the conference proceedings of the fifth Head Start National Research Conference. The focus of the conference was on the relationship of environment and developmental changes. Keynote topics and speakers were: "How Can We Know Environment Really Matters?" (Michael Rutter); "Creating Developmentally Appropriate Environments" (Stephen Suomi); and "It's 2000 and Parents Are Still Saying 'No' to Friends Who Are 'Different'" (Valeria Lovelace). Other special session topics included neuroscience perspectives on brain development, the importance of studying children and families across settings, and interventions to support developmental transitions. Forty-four symposia are summarized in the areas of: (1) Head Start research and practice; (2) Administration of Children, Youth, and Families (ACYF) research; (3) child development, education, and care; (4) consequences of welfare reform; (5) culture and context; (6) health; (7) innovative research methods; (8) language and family literacy; (9) parental influences on child development; (10) parents and social institutions; (11) research and policy; and (12) very early development. Poster sessions are also summarized on the following topics: (1) biobehavioral approaches to development; (2) child and family strengths and resiliency; (3) children with disabilities; (4) cultural continuities and discontinuities; (5) early intervention and child care programs and

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practices; (6) evaluation methods; (7) family involvement in children's education; (8) family literacy; (9) family structure and functioning; (10) health and nutrition; (11) home/school continuities and discontinuities; (12) home visiting; (13) infants and toddlers; (14) information technology; (15) instrument development and validation; (16) language and emergent literacy; (17) long-term effects of early intervention; (18) maternal mental health; (19) parenting/parent attitudes; (20) promoting mental health; (21) quality of early care and education; (22) research partnerships with communities; (23) school readiness; (24) school transitions; (25) social/emotional development; (26) staff development; (27) understanding neighborhood and community influences; and (28) welfare reform and impact on children and families. Four appendices include a list of the cooperating organizations and peer reviewers, a subject index, and a directory of participants. (KB)

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SUMMARY OF CONFERENCE PROCEEDINGS

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DEVELOPMENTAL AND CONTEXTUAL TRANSITIONS OF CHILDREN AND FAMILIES

Implications for Research, Policy, and Practice

Head Start's Fifth National Research Conference

June 28–July 1, 2000
Washington, D.C.

Presented by
Administration on Children, Youth and Families
Administration for Children and Families
Department of Health and Human Services

In collaboration with
Columbia University's
Mailman School of Public Health
Heilbrunn Center for Population and Family Health

and
Society for Research in Child Development

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ACKNOWLEDGEMENTS

This document was prepared by
Columbia University's Mailman School of Public Health
Heilbrunn Center for Population and Family Health
60 Haven Avenue, B3, New York, NY 10032

under Contract No.
DHHS 105-99-1520

in collaboration with
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2001

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SPECIAL SESSIONS

Opening Session

GREETINGS:

Patricia Montoya

Commissioner, Administration on Children, Youth and Families

Patricia Montoya serves as the Commissioner on Children, Youth and Families (ACYF) at the Department of Health and Human Services. She was nominated for this position by President Clinton on July 17, 1998, was confirmed by the Senate on October 21, 1998, and sworn-in by Vice President Gore in a ceremony on December 14, 1998.

As Commissioner of ACYF, she oversees the implementation of federal programs that assist vulnerable children and youth. ACYF program areas include Head Start, the Child Care Bureau, the Family and Youth Services Bureau, and the Children's Bureau (which houses the Office of Child Abuse and Neglect). Ms. Montoya controls a budget of over 12 billion dollars and manages a staff of 180. She also serves as spokesperson for the Administration on issues related to child and youth development, early childhood education, child protective services, foster care, adoption and the challenges and opportunities facing children, youth and families.

Before assuming the leadership of ACYF, Patricia Montoya was the Regional Director of Region VI for the U.S. Department of Health and Human Services. She was appointed to this position on September 12, 1994 by Donna Shalala, Secretary of Health and Human Services. As Regional Director, Ms. Montoya served as the Secretary's personal representative and was the liaison to federal, state and local elected officials, as well as private sector business and community leaders in the five-state region. Her wide-ranging responsibilities included implementation, oversight and public speaking on Medicaid managed care, the Children's Health Insurance Program, teen pregnancy, welfare reform, child care, Safe Passages for Youth, and community development.

Prior to joining the Administration, Ms. Montoya was Practice Manager for Presbyterian Family Healthcare, a hospital-based primary care and urgent care center in Albuquerque, New Mexico. From 1989 to 1993, she served as the executive director of New Mexico Health Resources in Albuquerque, and for 2 years she was in Washington, D.C., where she was Assistant Director for the American Nurses Association.

A nurse by training, Patricia Montoya has an extensive clinical background, including pediatrics, emergency room/urgent care, primary care outpatient and home health. Throughout her career, Ms. Montoya has worked to improve outcomes for children and families through her work in pediatrics, school health, community outreach and health policy.

Ms. Montoya was born in Albuquerque. She received her Bachelor's degree in nursing in 1975 and her Master's in public administration/health administration in 1983, both from the University of New Mexico, Albuquerque.

Long active in Hispanic community and political activities, Ms. Montoya is a member of the National Hispanic Nurses Association; the American Nurses Association; and Sigma Theta Tau, the National Honor Society of Nursing. Other groups she has worked with include the National Advisory Council on Nursing Education and Practice; the White House Health Professional Review Group on Health Care Reform; the New Mexico Health Policy Commission—Geographic Access Committee on Health Manpower; the Board of Director of Family/Child Services; and Healthcare for the Homeless.

Esther Kresh

Federal Project Officer

Administration on Children0, Youth and Families, Head Start Bureau

Faith Lamb-Parker
Columbia University

John Hagen
Society for Research and Child Development

INTRODUCTION OF KEYNOTE SPEAKER:
John Hagen

KEYNOTE SPEAKER:
Professor Sir Michael L. Rutter

How Can We Know Environment Really Matters?

Professor Sir Michael Rutter completed his basic medical education at the University of Birmingham, England, qualifying in 1955. After taking residencies in internal medicine, neurology and pediatrics, he trained in general psychiatry and then child psychiatry. He spent the 1961/62 year on a research Fellowship studying child development at the Department of Pediatrics, Albert Einstein College of Medicine, New York, returning to work in the Medical Research Council Social Psychiatry Research Unit. In 1965 he took an academic position at the University of London's Institute of Psychiatry where he has remained, becoming Professor of Child Psychiatry, and Head of the Department of Child and Adolescent Psychiatry in 1973 (until 1995).

During the academic year 1979-80 he was a Fellow at the Center for Advanced Study in the Behavioral Sciences, Stanford, California. In July 1984 he was appointed Honorary Director of the newly established Medical Research Council Child Psychiatry Unit, based at the Institute of Psychiatry (until September 1998). In 1994, the Social, Genetic and Developmental Psychiatry Research Centre was established at the Institute of Psychiatry and he was appointed Honorary Director (until September 1998), and Professor of Developmental Psychopathology from October 1998. He has been a Trustee of the Nuffield Foundation since 1992 and became a Governor of the Wellcome Trust in 1996, a Trustee of the Jacobs Foundation in 1998 and a Trustee of the Novartis Foundation in 1999. In 1999 he was appointed Deputy Chairman of the Wellcome Trust. He is a founding member and Member of the Council of the Academy of Medical Sciences. Honorary degrees have been awarded by the University of Leiden, 1985; Catholic University of Louvain, 1990; University of Birmingham, 1990; University of Edinburgh, 1990; University of Chicago, 1991; University of Minnesota, 1993; University of Ghent, 1994; University of Jyväskylä, Finland, 1996; University of Warwick 1999. He was knighted in January 1992. He is President of the Society for Research in Child Development, 1999-2001, and was President of the International Society for Research in Child and Adolescent Psychiatry, 1997-1999.

Professor Rutter's research activities include resilience in relation to stress, developmental links between childhood and adult life, schools as social institutions, reading difficulties, psychiatric genetics, neuropsychiatry, infantile autism, effects of deprivation on Romanian orphan adoptees, and psychiatric epidemiology. His publications include some 38 books, 140 chapters and over 300 scientific papers. His teaching has been mainly postgraduate, with interdisciplinary seminars on child development and child psychiatry.

Professor Rutter has received many prestigious awards, including the Society for Research in Child Development Distinguished Scientist Award, 1989; the John P. Hill Award for Excellence in Theory Development and Research on Adolescence from the Society for Research on Adolescence, 1992; the American Psychological Association Distinguished Scientists Award, 1995; the Castilla del Pino Prize for Achievement in Psychiatry, Cordoba, Spain, 1995; the Helmut Horten Award in 1997 for research in autism that has made a difference to clinical practice.

Professor Rutter is on the editorial boards of some 20 journals. He also continues in clinical practice seeing children and adolescents. As a researcher and teacher he is particularly interested in building bridges between knowledge of child development on the one hand and clinical child psychiatry on the other.

Esther Kresh: We are delighted to have you all with us. As I look across this room it reminds me of a line from the movie, *Field of Dreams*, "If you build it, they will come." Some of you have been coming for five times; some of you are new to this conference. We think we have a very exciting and informative program for you.

It takes a lot of hard work to put a conference like this together and many people have been involved, some of whom will be introduced to you shortly. I would like to start by mentioning two people in particular who have been here since the very first conference and are still with us today. First, John Hagen, Executive Officer of SRCD. John has not only brought the prestige of SRCD to this partnership, but he has provided many of the themes and ideas of the conferences as well as many of the prominent scholars who had not participated in Head Start before. Second is Faith Lamb-Parker, the project director. Faith's scholarship, her conference management, and her sheer graciousness are unparalleled. If a conference has such a thing as a heart and a soul, that heart and soul is Faith.

Speaking of heart and soul, we were very disappointed to learn this morning that someone very dear to us, Helen Taylor, who was expecting to be here this morning, was not feeling up to coming. She asked that we extend her greetings to all of you and to let you know how much she wanted to be here. As most of you know, she has not only been a tireless and ceaseless worker for children and families all of her life, but she is also a major supporter of research. It is because of Helen that research is alive and well in Head Start today. All of us owe her a great debt of gratitude for her support for research and also her support for these conferences.

I am delighted that we do have with us today Patricia Montoya, Commissioner of the Administration for Children, Youth and Families. I will not read her biography since you will find it in the program. Instead, I would like to say something on a more personal note. I have been with the Administration for Children, Youth and Families since almost the very beginning, when it was called the Office for Child Development, and my good friend and colleague Ed Zigler was its first director. He will understand when I say that I have never worked for a commissioner who has shown more care, concern, and support for the staff back in the Switzer Building. I think I speak for all of them in telling her how much we appreciate her. I now introduce Patricia Montoya.

Patricia Montoya: I would like to take the opportunity to welcome you all to this very important conference. I know that everyone is anxious to plunge into the substance, and so I promise to be brief. I wanted to join you this morning to let you know that we at the Administration on Children, Youth and Families are thrilled to see the growing connections between research and practice that have been flourishing across the country because of many of you, through forums like this, and through the many partnerships that have developed in the field.

The first Head Start Research Conference was organized in 1991 with the intention of bringing researchers and practitioners together to share insights, experiences, and research findings: ingredients crucial for innovation and change in the realm of early childhood development. It was timely because as Head Start has rapidly expanded during this administration, the importance of research and what Head Start is all about has become even more prominent. It also was timely that we have moved ahead in this endeavor. We have worked with Head Start to create a foundation for future collaborations among individuals from diverse personal and professional backgrounds, an important ingredient of Head Start. In the 9 years since its inception, Head Start's National Research Conferences have succeeded in doing just that. By providing a forum for discussing ongoing and emerging issues related to early childhood development, the conference has been effective in promoting cooperative efforts among members from a wide variety of professions and disciplines.

Sixty organizations and individuals, including universities, graduate students, research institutions, and mental health experts have developed formal partnerships with Head Start to advance research and development agendas. These partnerships are located across the country and cover a wide variety of topics, such as an illiteracy focus in Florida, a numeracy study in Philadelphia, a study of the effects of community, family and media violence on children's development in Michigan, a look at how the nutritional beliefs and practices of Hispanic families impact child health in California, and just a week ago there was an article in the *Washington Post* on a fatherhood study that was conducted here in the Washington area through a Head Start research scholar's grant, to name a few. We know that all across the nation we are delving into a variety of important issues and advancing the knowledge base in the field, showing through research the impact of what is happening in our programs and what works.

It is our hope that in the tradition of the four preceding conferences, this conference will also facilitate the formation of new and lasting Head Start partnerships that are dedicated to expanding our understanding of issues that are central to the care, development, and education of children in their most important early years. You have a wonderful program for the next few days and I hope that you will get a great deal out of both the formal sessions as well as the informal discussions with your fellow participants.

I will now turn the floor over to Faith Lamb-Parker, Associate Clinical Professor at Columbia University's Mailman School of Public Health, and the principal investigator for the conference. Welcome! I know you are going to have a wonderful conference.

Faith Lamb-Parker: Welcome. As you know, our collaborating organization is the Society for Research in Child Development, and John Hagen is its executive officer. Esther, John, and I have been partners in developing and conducting these research conferences since 1991. Originally, Esther Kresh, the Federal Project Officer, helped conceptualize these conferences as a place where researchers and practitioners could learn from each other by sharing information. Ten years later, we see that through these conferences, Head Start has not only taken a leadership role in disseminating the latest information on early childhood and family research and practice, but also been in the forefront in fostering strong and sustained partnerships between researchers and practitioners. I am very honored to be part of this exciting endeavor.

We work with a program committee whose members have given freely of their time and expertise. One program committee member, Ann Bardwell, is having surgery right now and cannot be with us, and we will miss her. Another program committee member, Gerald Sroufe, will be joining us a little later. I will now introduce the other members: Kathryn Barnard, University of Washington; Cheryl Clark, consultant; Cynthia Garcia Coll, Brown University; Willie James Epps, Southern Illinois University; Sarah Greene, CEO of the National Head Start Association; Gloria Johnson-Powell, formerly from Harvard and soon to be at the University of Wisconsin-Madison; John Pascoe, University of Wisconsin-Madison; and Gregg Powell, National Head Start Association; Suzanne Randolph, University of Maryland; Carol Ripple, Ripple Consulting, formerly Yale University; Lonnie Sherrod, W.T. Grant Foundation; Mary Bruce Webb, Administration on Children, Youth and Families; and last, but not least, Edward Zigler, Yale University

The number of cooperating organizations for the conference has grown considerably since the first conference when there were only 15 national research organizations. Since that time we have grown and have joined with many more practitioner organizations. We now have 57 organizations representing research and practice, and covering a wide range of disciplines. We would like to thank them for their continued support and thank their representatives who are here. This year we have a new initiative focusing on students. We have asked the cooperating organizations to sponsor students, paying for their registration, and in some cases paying for their entire trip.

I also would like to thank the program staff from Columbia University, Ruth Robinson and Alana Rosenberg, and Bethany Cherico and her staff from Ellsworth Associates for their hard work and good humor in the face of inevitable crises that of course we always have.

Kresh: I know that all of you are disappointed that Helen could not be here, but we have set up a space next to the Information Center where we will have cards that you can use to write notes to her. At the end of the conference, we will have someone deliver the cards, along with flowers, to her. I now turn the podium over to John Hagen.

John Hagen: I believe we had about 500 participants at the first conference, and we have over 1,000 registered for this conference. The success of the conference, certainly in terms of numbers, is evident. I hope we all agree that each time the quality of the program has improved as well.

Yesterday, somebody referred to Esther, Faith, and me as the three musketeers. Another person said, "Maybe you are thinking of the Marx Brothers." At times probably either applies. Someone else asked, "How long can they keep doing this?" Then the comment was made, "Well, you know the Energizer Bunny." There is funding for at least one more conference, so we will probably be doing at least one more 2 years from now. Stay tuned and we will let you know.

It is certainly my pleasure to introduce to you Dr. Michael Rutter. Dr. Rutter's rather extensive résumé can be found in the program so I will only highlight his many accomplishments.

Michael Rutter is Professor of Child Psychiatry at the University of London's Institute of Psychiatry, and he served as head of the Department of Child and Adolescence Psychiatry there until 1995. He completed his medical education at the University of Birmingham in England and after taking residencies in internal medicine, neurology and pediatrics he then went to the famous Maudsley Hospital in London for training in psychiatry.

Rutter spent a year in the United States at Albert Einstein School of Medicine and then returned to a social psychiatry unit in London. He also served as a Fellow in Palo Alto at the Center for Advanced Study of Behavioral Sciences in the late 1970s.

I will just note a few of his many awards and honors. He received the John P. Hill Award from the Society for Research on Adolescence, and the American Psychological Association's Distinguished Scientist Award in 1995. In addition, he received the Castilla de Pino Prize in Psychiatry in Spain. He was knighted in his homeland in 1992; hence, the title "Sir." Professor Rutter is the author or editor of dozens of books, has written hundreds of scholarly articles, and serves on many editorial boards. He also currently serves as deputy chair of the Wellcome Fund, which is the largest philanthropic fund in the world. I know this is not just an honorary title because I have been at numerous meetings with him where he is constantly interrupted by phone calls, e-mails, and so forth from the demands of that work.

As a researcher, a teacher, and a clinician he has combined his work to speak eloquently to all three groups. He is especially known for building bridges between knowledge of child development on the one hand and clinical child psychiatry on the other. His areas of expertise include the transition from childhood to adolescence and then to adulthood, neuropsychiatry, genetics, reading difficulties, autism, and psychiatric epidemiology.

I am especially pleased to introduce him to this group because currently he serves as president of my society, the Society for Research in Child Development.

Michael Rutter: What I thought I would do is present an overview of this broad topic. The reason for doing so is that since the very beginnings of Head Start and its antecedents, there have been attacks suggesting that it was all rather a waste of time. You are familiar with Arthur Jensen's conclusion that compensatory education has failed, and Judith Rich Harris' 1998 book arguing that parenting has no long-term effects on psychological development. Are we all wasting our time? Is Head Start attempting the impossible?

I do not want to review findings on Head Start and related programs, but rather take the broader topic as to whether the environment does make a difference to anything, how can we know, and more particularly, how can we know which aspects of the environment have which effects?

I will not spend long on the methodological issues, but simply say that over the years it has become apparent that there are important methodological considerations. The need for longitudinal data, the need for multiple sources of information, and the need, as first put forward in Richard Bell's important paper in 1968, to take into account the possibility that associations represent children's effects on the family rather than family effects on the children. That has implications for sampling, for designs, and for methods of data analysis.

Let us pass over that and turn to more recent critiques, the first of which is that family-wide influences are unimportant. Various leading behavior geneticists have put this claim rather strongly. It is, however, misleading. It is based on univariant behavior genetic data, and we know from multivariant analyses that the findings are rather different. Perhaps the more important feature is that it is misleading because it is necessary to study family influences as they impinge on individuals. The lesson from this is not to take the message that families do not matter, but to study family influences as they impinge on individual children within that family.

Another claim is that many environmental effects are mediated by genes. This arises because of the very extensive evidence of gene-environment correlations. That evidence is solid. Such correlations exist and are important. It is misleading, however, because the same behavior-genetic evidence confirms environmental risk mediation as well as showing that genes mediate some apparently environmental effects. The lesson is that we must use designs that rigorously test environmental risk mediation. Simply saying that it looks like an environmental risk factor is not enough. We must know how it actually operates.

Let me give a few illustrative examples of data to indicate the kind of things that we are talking about. These are data from Lee Robins' 1966 now classical follow-up study of children attending American child guidance clinics in the 1930s and followed to mid-life. Findings from this study indicate that boys who showed antisocial behavior in childhood show vastly more psychosocial stressors/adversities, such as divorce, unemployment, at least ten job changes in 10 years, having an unskilled job, or being practically without friends in adulthood. The implication is that behavior is influenced by the environments that people experience. The examples of adult environments given here are of course the environments that have been much studied as environmental risk factors for adult psychopathology.

The second example is from Champion's 18-year follow-up of girls from London. He related the children's behavior at age 10 as measured on a relatively crude teacher questionnaire in relation to the children's experience of severely threatening events, or longer-term difficulties of a related kind. Findings indicate that the girls who showed conduct problems in childhood had an increased rate of stressful life experiences in adult life. Those who showed emotional problems in childhood also had an increase, although the increase is not as great. Obviously I am dealing here with behaviors, not with genes, but genes will also influence these behaviors. The important point is that children's behavior does influence the environments they experience.

The next challenge came from the claim from behavior genetic studies that gene-environment interactions are rare. This is based on nonspecific black box analyses, which means simply that unmeasured genes were examined in relation to unmeasured environments, and that these generic genes and generic environments did not show interactions. By and large that is true. However, it is misleading because it is biologically implausible. That is to say, we know from all hazards that have been looked at that there are huge individual differences in people's response. That is true whether one is talking about psychosocial hazards, malnutrition, irradiation, or extreme temperatures and it seems implausible that genetic factors would play no part in that. In any case, there is positive evidence of interactions. We know that genetic influences are involved in individual differences related to susceptibility to environmental hazards. The implication is that it is essential to study genetic influences on environmental susceptibility.

The distinction is an important one because there has usually been an assumption that what we are actually looking for are genetic effects on behavior. While those may be present, they may operate through environmental susceptibility, which opens up a different range of issues. Again, it is the odd example used to illustrate the nature of the phenomena.

A study of adoptees done by Michael Bohman and colleagues in Scandinavia looked at criminality in adult life based on whether there was a biological risk factor (an antisocial parent, a parent with a chronic drug dependency), or a rearing risk (an adopting parent with similar characteristics), or neither of these. The findings in this study show that if the individuals had neither a biological or rearing risk, the risk of criminality was extremely low, about three percent. This doubled to about six percent if there was a rearing risk, but no biological risk. With a genetic and biological risk but no rearing risk, the risk for criminality rose to 12%. However, there was up to a 40% chance of criminality if both were present. The implication here is that genes are operating in part through a vulnerability to risk environments.

The findings from a Virginia twins study show a gene-environment interaction in relation to life events (see Figure 1). The point that I want to bring out, however, is that ordinarily this is entirely incorporated in the variance for the genetic effect. What we have done is break that down into a baseline gene portion that remains the same across environmental risk exposure, and a gene-environmental portion that is dealing with the interaction term. What this shows is that in the presence of two or more life events, the genetic effect is about half accounted for by baseline genes, and about half by the interaction of genes and the environment.

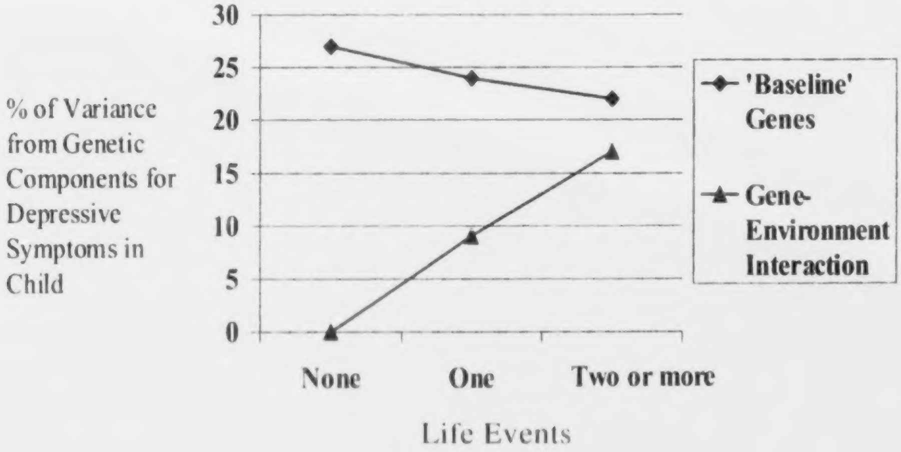

Figure 1. Effect of Life Events on Variance in Depressive Symptoms Accounted for by 'Baseline' Genetic Effects and by Gene-Environment Interaction (from Silberg et al., 2000)

Figure 2 shows the same thing except that this time we are dealing not with genes and environment as such; we are dealing with the phenotype. What this shows is that life events of the kind studied in this study have no effect if neither parent shows an anxiety disorder or a depressive order, but that there are effects of life events if the parents show psychopathology. Now, the psychopathology will, of course, be indexing not only genetic risk, but also more long-standing environmental risks. However, the point is that interaction effects are important.

These are all very important considerations, but what evidence is there that there are strong environmental effects to be considered? First is the fact that there have been a major rise over time in rates of psychopathology—a major rises over periods of decades, which is far too short a time period for that to be accounted for by changes in the gene pool. This rise must be due to some environmental factor. Second, there are major benefits from rescues from very bad environments. Third, the correlations within monozygotic identical pairs are well short of unity.

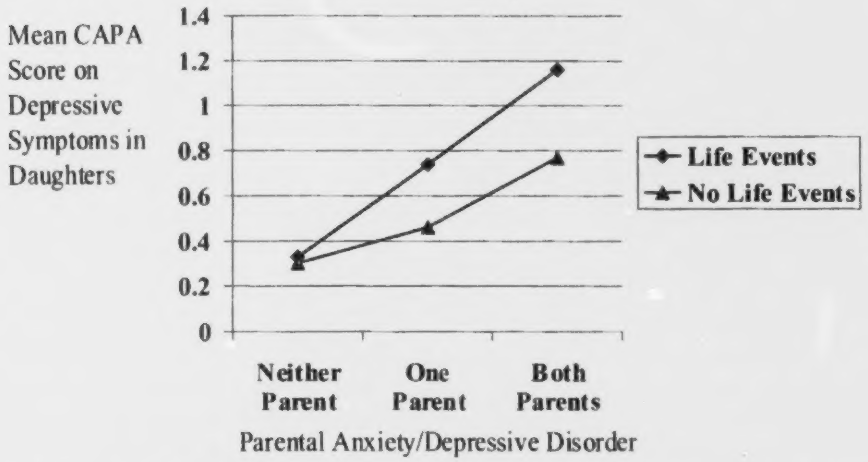

Figure 2. Levels of Depressive Symptoms in Adolescent Girls According to Parental Emotional Disorder and Life Events (from Silberg et al., 2000)

To illustrate that, the figures of crime in the United Kingdom over the period between 1950 and 1998 show that there has been a major increase in levels of crime. One might ask if this could be an artifact of changes in police practice and the like? The answer is yes; those are important to take into account. However, having taken this into account, one is still left with major differences. In addition, there are similar increases that have been recorded and shown not to be an artifact in relation to drug and alcohol problems, suicidal behavior, especially in young males, and depression.

It is of interest that these are changes over time that are particularly found in young people. It is not a general increase in the population as a whole. For example, over the same time span that suicide rates in young males have been increasing, they have been decreasing in older people, both male and female. Therefore, it would seem that there is something particular about childhood, adolescence, and early adult life where something is happening.

I want to say just a word on the requirements for testing environmental risk hypotheses. It is important to consider several key points. First, we must have designs that pull apart variables that ordinarily go together. "Twin" and "adoptee" designs are well known for dealing with genes and the environment, but there is a range of natural experiments about which I will say more, and of course, there are intervention studies. We need longitudinal data to study within-individual change. We need sensitive and discriminating measures of risks and outcomes. We need large enough samples to be able to show what we are looking at. We must design in a way that we can choose alternative hypotheses and compare them against each other. Far too much research is designed to prove the particular hypothesis favored by the investigator. If we are really going to take this seriously, we must pit one hypothesis against another, and there must be an explicit articulation of the assumptions in the design used. All of these designs involve particular assumptions and they can give us misleading answers unless they are looked at and tested.

What designs can we use to test environmental hypotheses? I think that there are six broad designs—a variety of twin designs, adoption designs, natural experiments, migration strategies, studies of extrafamilial environments such as schools, and intervention strategies. Here are a few examples to indicate the power of some of these approaches.

In an ingenious study by Michel Duyme's and his colleagues in France, they looked at children who had been rescued from parents who were abusing or neglecting them. The children were adopted between ages 4 and 6½ and had been given I.Q. tests prior to adoption. This is a special sort of sample and it is unique in several respects. First, it shows changes over time in intellectual functioning, and second, these changes are related to the qualities of the adoptive home. There has been an acceptance among behavior geneticists that if one comes from a really terrible environment and is put into a good one, that probably does a person good. There has been much more skepticism about what qualities matter in the better environment into which one is put.

In this study, the children had mean I.Q. levels in the upper 70s before adoption, indicating that they were dealing with a group of children who were not severely retarded, but were clearly functioning well below population norms. For all groups, the adoption was followed by intellectual gains, but there were differences in these gains based primarily on whether the children were adopted into high-, mid-, or low-SES homes. Not only was the rescue important, but also the qualities of the home in terms of educational opportunities. In passing I also note that the correlations over time are exactly the same in these three groups. In other words, the raise in overall I.Q. level has been unaccompanied by any change in individual differences. It is these individual differences that have made medical behavior geneticists skeptical about effects on level. The two do not necessarily go together.

In a different natural experiment, children from very depriving Romanian institutions were adopted by families in the U.K. Mean scores on the Denver Developmental Quotient at the time the children came to the U.K. were just over 60. The mean score at age 4 was just over 100, showing that the change in environment was accompanied by a massive gain. However, the interest again lies in looking at within-group differences. The skepticism comes in terms of whether one can find variations.

McCarthy scores for non-Romanian adoptees in the U.K. who were nondeprived and adopted under the age of 6 months, are the same as those for Romanian children who entered the U.K. before the age of 6 months. However, those children who had spent between 6 and 24 months in institutions, and those who had spent between 2 and 32 years in institutions showed much lower scores. The difference according to the duration of deprivation is 24 I.Q. points. That, by any stretch of the imagination, cannot be regarded as a trivial difference.

The next question is whether we are dealing with the duration of privation or with the time in the adoptive home? At any one point in measurement the two are, of course, totally confounded, because the children went straight from the institution to the adoptive home. There are longitudinal data that can be used to compare children whose institutional care lasted up to 18 months against those for whom it lasted at least 2 years. Both groups have now been in adoptive homes for 2½ to 4 years. There is a massive effect of duration of privation, even after controlling for the duration in the adoptive home.

A different design, the Virginia twin study, looks at monozygotic or identical twin pairs (see Figure 3). Because monozygotic twins share all their genes, the assumption is that differences between them must be due to environmental factors of one sort or another. This study looked at whether the differences between monozygotic twins in stressful life experiences are related to the risk of depression within the pair, and the answer is that it is. Within-pair difference on the one is associated with within-pair difference on the other. The Virginia twin study also looked at the effect of parental criticism on conduct problems. Data from Carbonneau, et. al. indicates that within genetically identical pairs the more criticism there is, the more conduct symptoms appear.

A different twin study from Pike, et. al., looked at correlations within monozygotic pairs. The measures were composited across informants, looking at correlations with antisocial behavior. Findings show a moderate correlation between mothers' negativity and antisocial behavior and fathers' negativity and antisocial behavior; that within monozygotic pairs there is good evidence of environmental effects.

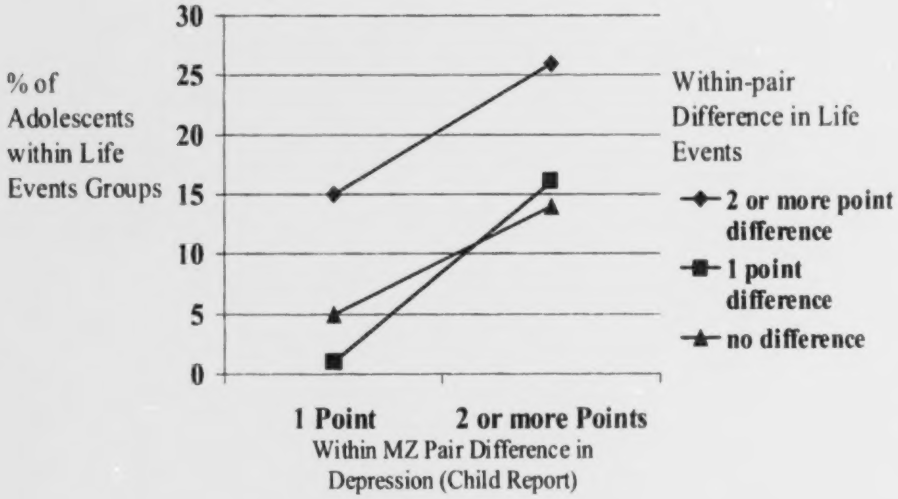

Figure 3. Association Between Within MZ Pair Differences in Life and Within MZ Pair Differences in Depression (from Silberg et al., 2000)

This diagram (see figure 4) is simply the background of the model that is treating the environment as a phenotype. That is to say, it takes the evidence of gene-environment correlations and puts that into the equation, as it were, and then uses bivariant analyses to look at the association between that genetically influenced environment and whatever outcome one is interested in. By partialing out the genetic effect, you can see whether or not there is a true environmental effect.

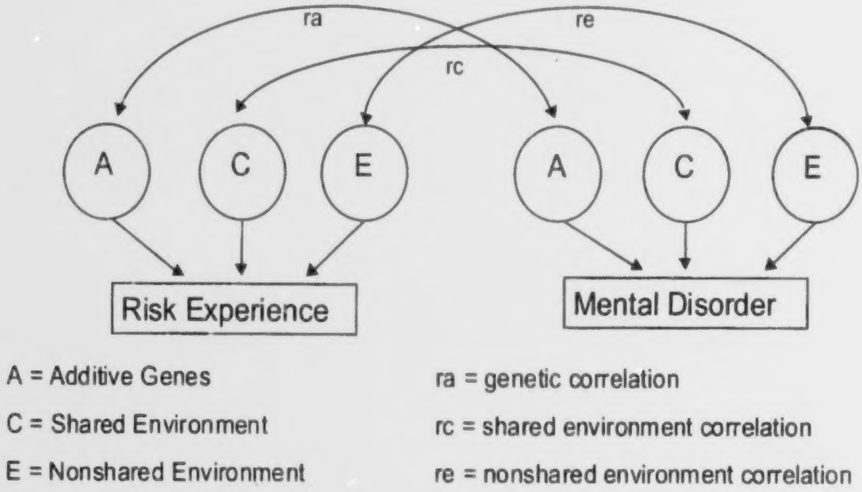
ra
re
rc
A
C
E
A
C
E
Risk Experience
Mental Disorder
A = Additive Genes
C = Shared Environment
E = Nonshared Environment
ra = genetic correlation
rc = shared environment correlation
re = nonshared environment correlation

Figure 4. Treating the Environment as a Phenotype

For example, Pike's data on family negativity and children's antisocial behavior is shown in Figure 5. The first line shows the genetic correlation between risk and antisocial behavior. The effect is genetically mediated. The second line is dealing with a shared environment that ranges from .16 and .37 so that there is a substantial environmental effect. In passing, I would note that this actually is a shared environmental effect despite the fact that it was measured on a child-specific basis.

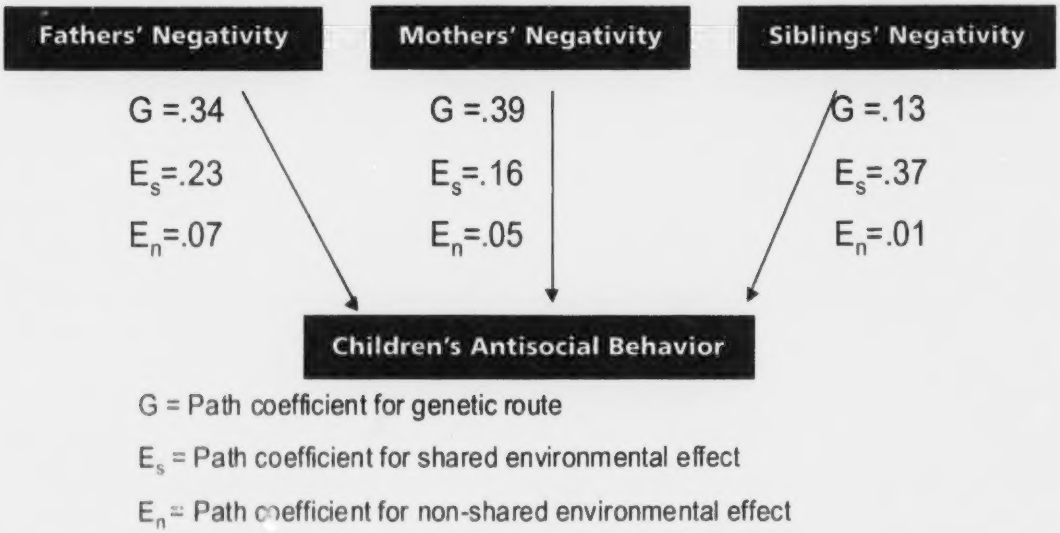
Fathers' Negativity
Mothers' Negativity
Siblings' Negativity
G =.34
E_s=.23
E_n=.07
G =.39
E_s=.16
E_n=.05
G =.13
E_s=.37
E_n=.01
Children's Antisocial Behavior
G = Path coefficient for genetic route
E_s = Path coefficient for shared environmental effect
E_n = Path coefficient for non-shared environmental effect

Figure 5. Family Negativity and Antisocial Behavior (Data from Pike et al., 1996b)

Looking at the possible effects of a geographical move, a paper by Osborn using data from a longitudinal study by David Farrington and Donald West show what happens to delinquency when boys living in a high-risk inner London area move out of London. We already know that if they move within London there is little if any effect on antisocial behavior. However, those who move out of London have a substantial drop in antisocial behavior, even though they were the same when they were younger. A more detailed analysis of psychosocial risk factors shows that this is a real change. Of course, what one cannot tell from these data is whether the change is due to a change in the family, a change in schooling, a change in the community, or a change in crime opportunities, but a change in environment certainly brought about a change in behavior.

In another longitudinal study, putting together several of our own longitudinal studies, Andrew Pickles studied a group who showed antisocial behavior in childhood to determine if who a person marries has an effect on their behavior. He looked at the characteristics of the spouse, measuring support or lack of support from a nondeviant partner. He found that there was no change over time if there was a lack of marital support, i.e. they were either on their own or the marriage had broken up or they were in a discordant marriage without support from a deviant partner. If, however, they married somebody who provided harmonious support, social functioning improved and antisocial behavior dropped.

In a study by Penny Roy and her colleagues, the interest lies in taking seriously the notion that even within good quality institutions there are adverse effects on behavior (see Figure 6). These are children who were removed from parents in infancy at a mean age of 3 months. Those placed in residential nurseries were compared to those who were placed in individual family foster homes, and to classroom controls. These two groups are identical in terms of having a quite appalling family background. What this figure shows is that the institution-reared children are showing much higher rates of hyperactivity and inattention by the time they are 5 to 7 years of age.

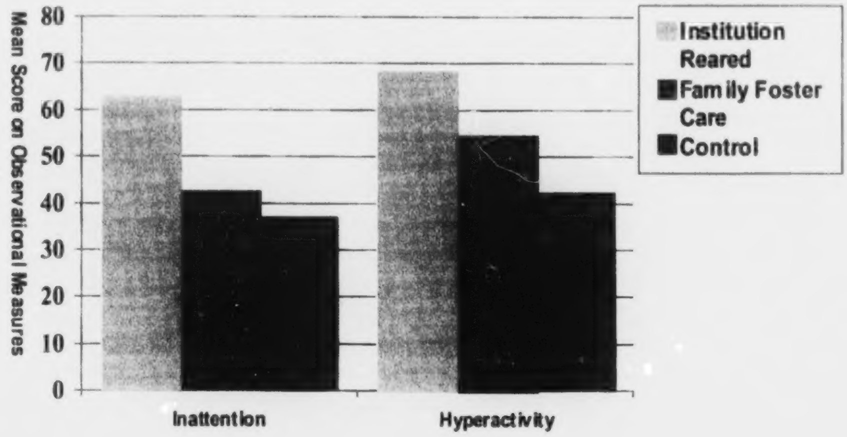

Figure 6. Effects of Institutional Rearing on Hyperactivity/Innattention (Roy et. al., 1998)

There are many more examples I could have cited. The point is that there are a range of research strategies that can test environmental risk mediation hypotheses in a rigorous fashion.

That is all very interesting, but does this coalesce to provide any overall conclusions on anything about specific environments? Yes it does. Six different types of strategies—epidemiological findings, longitudinal studies, intervention research, twin studies, adoption studies, and natural experiments—all show evidence that coercive hostile parenting creates a predisposition to disruptive behavior. We are not relying here on any one research strategy. If we were, we would have to be much more cautious about what we conclude. However, each of these strategies has a rather different set of strengths and weaknesses, and if they all point in the same direction we can have reasonable confidence that they are probably valid.

Epidemiological findings, longitudinal studies, intervention research, twin studies, and natural experiments are all sources of evidence that qualities of the extrafamilial environment; i.e., schools, peer groups, and community, influence disruptive behavior. In addition, adoption studies, natural experiments, and intervention studies are sources of evidence that educational and communicative qualities of the family foster cognitive development. This is a smaller range of studies, but they include studies such as Michel Duyme's mentioned previously, where the results are really pretty compelling. Moreover, they show that it is not just the very extreme environments that matter; it is environments more within the broad range as well. Although of course, it is the case, as one would expect, that the bigger effects are found with extremes.

The sources of evidence that stressful life events lead to emotional disturbance are from epidemiological studies, case-control studies, twin studies, and animal studies. Again, all point in the same direction.

I think that we can put these together to draw some broader inferences on what the main risks are. There are various descriptors that I might have used, but I have divided them into three broad groups: a) lack of ongoing, selected, committed relationships; b) social groups with a deviant ethos, attitudes, or set of behaviors; and c) a lack of rich reciprocal conversational interchange and play.

There is still some need to conduct research on risk mechanisms, which I will not go into detail about, but simply say that studying the causes of individual differences in environmental risk exposure remains a priority. There is still a need to differentiate between risk indicators and risk mechanisms. Research into individual differences in responsivity to stress and adversity are in their infancy. We need to determine the effects of risk mechanisms on the organism. Psychosocial researchers seem bothered when I say that, but if one is saying that experiences have long-term effects, one has to say, by what mechanism? Why and how are they carried forward? Are we talking about effects on neural functioning? Are we talking about cognitive sets? Are we talking about effects on styles of behavior and interaction with other people? Are we talking about neuroendocrine effects? There are a range of possibilities. But the point is we need to know what is happening to carry forward the effects in time.

The following direct statements derived from quite an extensive body of empirical data, and list some substantive conclusions on environmental risks:

1. Psychosocial influences do have environmental effects.
2. Most single experiences, like most single genes, have small effects.
3. The main impact comes from combinations of risks.
4. People vary greatly in their susceptibility to psychosocial risks.
5. Often, environmental effects are greatest in those at genetic risk.
6. On the whole, the greatest effects on psychopathology derive from chronic adversities rather than acute stresses.
7. There are huge individual differences in people's exposure to stress and adversity.
8. To a considerable extent, this variation derives from people's shaping and selecting of their environments. This seems to imply conscious choice, but I am implying something more subtle, but nevertheless still powerful.
9. Both early and later experiences are influential but, to an important extent, the latter are shaped by the former. That is important because it is different from the claims that were made by some years ago that early experiences fix development. They do not fix development, but they have long-term effects because of indirect chain effects that may be quite powerful.
10. Despite claims to the contrary, there ARE major effects from family-wide influences. It is true that they impinge differentially on the children, but family-wide features such as discord, poverty, disadvantage, and so on, do matter.
11. Qualities of childrearing DO matter, but children vary in their response to broad family influences. One of the weaknesses of much family research in the past has been looking at only one child in the family and ignoring the very marked differences among siblings.
12. Psychosocial influences derive from the family, the peer group, the school, and the community, and especially from their combination. Each of these influences has an effect, but they are not independent of one another. If one thinks of the peer group for example, yes indeed, there is good evidence of powerful peer group effects, but families play a considerable role in influencing which peer groups their children are part of.
13. We know much more about risk INDICATORS than we do about risk MECHANISMS. That is to say, we have a mass of data on statistical associations, but we know much less about what those mean in terms of causal mechanisms.
14. Many environmental effects seem to influence LEVELS of psychopathology or psychological functioning more than they do INDIVIDUAL DIFFERENCES. It is not that the two sets of causal influences are unconnected, but it does say that there can be big effects on the one without big effects on the other. Some examples of studies looking at this are the Duyme study, the time trends of antisocial behavior and crime, data that Jack Tisak brought together some years ago on the height of London schoolboys. This last study found that over the first half of this century the average height of London schoolboys rose by 12 centimeters. That is a lot. Height is, however, one of the most

strongly genetically influenced of all human characteristics. This was true at the beginning of the century, it was true in the middle of the century, and it is so at the end of the century. These individual differences were predominantly affected by genes, but actually diet had led everybody to go up in height. James Flynn's analysis of I.Q. data shows much the same thing; that over time there has been a very substantial rise in I.Q. scores. He has taken the methodological problems very seriously, and I think the results are compelling. The rise is real. It has had very little effect on individual differences.

15. In that connection, the greatest challenge lies in identifying the environmental mechanisms underlying the huge rise in psychosocial problems in young people. Said more provocatively, in the Western industrialized world over the last 50 years, we have been enormously successful in making things worse for young people. If we knew why that had happened, we would surely be in a better position to know how to make things better. However, the amount of research that focuses on that issue is very small. Now, it is, I have to say, an incredible research problem, but that should be a challenge and not something to put one off.
16. On the whole, individual differences in the lifetime liability to mental disorder are NOT a function of particular patterns of discipline, toileting, or child care. That, I am sure, will be a surprise to no one here, yet as recently as Eleanor Maccoby's 1983 review, that was what most studies have been based on. At the time I went through my child psychiatry training some 4+ decades ago, that is what was being studied and taught. We now know that is not what matters.
17. Probably, the key influences mainly derive from serious lacks or distortions in the quality of social relationships and in their continuity, as well as in the ethos and values of the social groups providing the context for development.
18. Environmentally mediated psychosocial effects can be quite long lasting, but their persistence is very dependent on indirect chain effects. We must get away from the notion that there are permanent effects, mediated by goodness only knows what, and look instead at the ways chain effects develop. Our understanding of the links in that chain are the ways in which we are going to get an understanding that will enable us to know how and when to intervene.
19. In many respects, the feature we know least about is what experiences do to the organism. This is a key challenge.
20. The effects on the organism are likely to involve a mixture of changes in thinking/feeling patterns, neuroendocrine functioning, and neural changes. Obviously the answer is not going to be the same for all adverse experiences, so none of us should accept a general answer to that. The question rather is, for a particular set of experiences, which is the mix of mechanisms that are most important?

Let me end by dealing with some key challenges. The first, which has already been done to some extent, is still a need to use a range of rigorous research designs to test causal hypotheses. These include genetic designs, but as I have indicated, I do not accept the notion that that is the only way ahead. I believe that there are actually quite a broad range of strategies that can be employed. What we need to do is be creative and innovative in finding samples and finding the designs that will do what we want them to do in testing environmental risk hypotheses.

Secondly, we need to devise and develop better measures of psychosocial risk experiences. And I say that for three rather different reasons. We need better measures of extrafamilial environments. On the whole we do not have a ready set of measures of the peer group, school quality, or community influences that we can slot into major studies. There are, of course, quite detailed good measures that can be applied to each of these, but they are very time- and resource-intensive and not easy to apply outside special studies. We also need to look at child-specific experiences within the family. Although I have rejected the general claim that it is only child-specific experiences that matter, nevertheless we do need to understand how family-wide risk factors can impinge generally on all the children and have differential effects on separate individuals. We need to consider application to very large epidemiological samples. Why? Because of the need to look at gene-environment correlations and gene-environment interactions. I have indicated that they are real. I am struck by the findings that are beginning to come in internal medicine showing these interactions, not just in general but with specific genes. We see this in relation to infections, head injury, and the effects of smoking, as well as a range of other things as well. In order to show these interactions, one needs very large samples. In the U.K., the Wellcome Trust and the Medical Research Council are joining together to develop a population study of 500,000 people. That is an awful lot of people. Looking at environments in terms of infections or smoking is fairly easy to do on a large-scale basis. It is nowhere near as easy to do it with psychosocial risk factors for psychopathology that I have been talking about. Yet, if we are really in the business of trying to understand environmental risk mechanisms, we are going to have to be engaged in those sorts of studies, and we are going to have to adapt our measures to enable that to happen.

Third is that we must study the processes involved in both shared and nonshared effects, including nonshared effects from family-wide influences.

The fourth challenge is to study the individual and social mechanisms involved in the origins of experiences. It is very important to recognize the individual differences and to determine how they come about. I have focused for the moment on the ways in which people shape and select their environments, but of course, there are population-wide influences, such as racial discrimination and housing policies, that also lead to individual differences.

I have already talked about the causes of time trends in levels of psychopathology and the need to study the role of life events in onset occurrence and lifetime liability to disorder. In thinking about all of the outcomes that we are interested in, we have to be concerned not only with how difficulties began, but why they recur, or why they continue. It is clear from a range of studies in internal medicine as well as in psychology, that the explanations for the mechanisms involved may not be the same for each of those. We need to determine the variety of environmental effects on the organism. We need to investigate the possibilities of different forms of developmental programming. It is a reflection of the fact that we rejected, and rightly rejected, the fixed notion of critical periods in development. However, what has come back through a side door, and rightly come back, is a recognition that early experiences can have lasting or programming effects on development.

Let me give an example from internal medicine to illustrate this. Many of you may be familiar with what has come to be called the David Barker Hypothesis which is related to the evidence from studies in both Scandinavia and the U.K. that undernutrition and poor growth in the prenatal and early postnatal period is a risk factor, quite a major risk factor, for cardiovascular distress in mid-life. Now, that is interesting because in mid-life it is the overweight that are at risk for heart problems. So why does being underweight when one is young mean that one is at risk in mid-life? The notion is that early undernutrition leads to programming to enable the body to deal better with low nutrition environments. However, if one goes on in later life to the affluent diets of the West, the person is in trouble because the body has been programmed the wrong way for the different environments of later life. There are still details to be sorted out, but the notion is an interesting one.

There are also parallels in relation to allergies and other conditions. The evidence of parallel mechanisms in the psychosocial arena is much less advanced, but there are several examples that suggest there may be something of this kind. For example, one has to ask with our Romanian study, why does one get major effects of a kind that persist? We are not looking at the children at age 11, but we know halfway through the study that in many instances the effects are persisting at age 11. Why are they continuing? What has happened in the programming of their development? It is an exciting research topic and we do not know quite how it will turn out, but

I think it is an important one. We need to determine the mechanisms involved in the differential susceptibility to psychosocial hazards. As I have emphasized, all studies have shown that they exist.

What I hope I have been able to persuade you of is that it is not all a waste of time. Environments do matter. We do have to think seriously about some of the challenges advanced by the critics. They are not wholly wrong, although I think they are a bit out of balance. The real challenge is to get away from the unhelpful question as to whether environments matter and on to the question of which environments have which effects by which mechanisms. It is the exact parallel of those of us who have been critical of heritabilities. Knowing that there is a genetic effect is of no use in understanding mechanisms unless one knows how they operate. The same applies to environmental effects and to the interplay between the two. I think that one of the interesting challenges for the future is to bring together psychosocial research, developmental research, and genetic research because it is in this coming together collaboratively that the future lies.

Hagen: Four years ago at this conference Professor Rutter was a plenary speaker. At that time we thought he had captured where we were then and he gave us some real inspiration for beginning that conference and following through. Some of us felt we should have heard from him again 2 years ago, but then we thought it was not fair to him. We asked him to come back; now you can see why. He has done a wonderful job of reviewing some of the current issues and the controversies, giving us a very positive message while at the same time letting us know that the real challenges still lie ahead in terms of where we are going with research and how that research is going to influence policy and then ultimately practice.

Luncheon I

GREETINGS:
Sarah M. Greene
Chief Executive Officer
National Head Start Association

Barbara White
Gospel Singer/Actress/Music Director
Family Services Manager, District of Columbia Head Start Program

INTRODUCTION OF KEYNOTE SPEAKER:
Patricia Montoya
Commissioner, Administration on Children, Youth and Families

Patricia Montoya: It is my great pleasure to introduce our luncheon speaker, Dr. Stephen Suomi, Chief of the Laboratory of Comparative Ethology at the National Institute of Child Health and Human Development at NIH.

Dr. Suomi holds appointments at the University of Maryland, University of Virginia, Johns Hopkins, and Pennsylvania State University. After graduating from Stanford he received his Ph.D. in psychology from the University of Wisconsin-Madison where he served on the faculty for more than a decade prior to joining NICHD. Dr. Suomi has performed extensive research on the subject of biobehavioral development in rhesus monkeys and other primates, and the interaction of genetic and environmental factors in shaping individual patterns of development. He will address how the challenge of creating healthy environments for primates created a stimulus for defining conditions that supported growth and development. He will also address the extent to which his findings can be generalized to provide a framework for understanding human behavior and development.

KEYNOTE SPEAKER:

Stephen J. Suomi

Creating Developmentally Appropriate Environments

Stephen J. Suomi. Ph.D. is Chief of the laboratory of Comparative Ethology at the National Institute of Child Health & Human Development (NICHD), National Institutes of Health (NIH) in Bethesda, Maryland. He also holds appointments as Research Professor at the University of Virginia (Psychology), the University of Maryland, College Park (Human Development), and The Johns Hopkins University (Mental Hygiene), and is an Adjunct Professor at Pennsylvania State University (Human Development) and the University of Maryland, Baltimore County (Psychology). Dr. Suomi studied psychology as an undergraduate at Stanford University, and received his Ph.D. in Psychology in 1971 from the University of Wisconsin-Madison. He then joined the psychology faculty there, where he remained until 1983, attaining the rank of Professor. In 1983 he left Wisconsin to join the NICHD, when he began his present position.

Dr. Suomi has received international recognition for his extensive research on biobehavioral development in rhesus monkeys and other primate species. His initial postdoctoral research successfully reversed *the adverse effects of early social isolation, previously thought to be permanent, in rhesus monkeys. His subsequent research at Wisconsin led to his election as Fellow in the American Association for the Advancement of Science "for major contributions to the understanding of social factors that influence the psychological development of nonhuman primates." Since joining the NICHD he has identified heritable and experiential factors that influence individual biobehavioral development, characterized both behavioral and physiological features of distinctive rhesus monkey phenotypes, and demonstrated the adaptive significance of these different phenotypes in naturalistic settings. His present research focuses on three general issues: the interaction between genetic and environmental factors in shaping individual developmental trajectories, the issue of continuity vs. change and the relative stability of individual differences throughout development, and the degree to which findings from monkeys studied in captivity generalize not only to monkeys living in the wild but also to humans living in different cultures.*

Throughout his professional career Dr. Suomi has been the recipient of numerous awards and honors. To date, he has authored or co-authored over 300 articles published in scientific journals and chapters in edited volumes. He has also delivered over 300 invited colloquia, symposium and workshop presentations, and convention papers in the United States and in 12 foreign countries.

Steven J. Suomi: Those of us who work with primates have been concerned about environments for a long time, but that concern has been especially piqued since a change in 1986 in the Animal Welfare Act, an act by Congress. In 1986 an amendment was added to the Animal Welfare Act that stipulated that those individuals who work with nonhuman primates in captivity must provide them with an environment that promotes their psychological well-being. Can you imagine the challenge that new law presented to primatologists? Not only did one have to figure out what psychological well-being might entail for a nonhuman, but also figure out ways to measure or characterize it, and then design facilities that would serve to promote it, whatever it might be.

A few years later, Dr. Melinda Novak at the University of Massachusetts and I wrote a paper for *The American Psychologist* on the subject. We argued that rather than coming up with an overall definition of psychological well-being we could identify four parameters or dimensions that might be relevant to issues of well-being: good physical health; a full range of behaviors that ordinarily you might see in the wild, i.e., a full behavioral repertory; an absence of behaviors that are obviously abnormal, and an absence of prolonged stress or distress, although we all acknowledge that periodic stress actually may be beneficial. Overall, these individuals should be in a situation where they are able to cope with the day-to-day challenges of complex social life.

Over the years we have been able to come up with environments that seem to promote this, although the requirements for different species of primates are not the same. What is great for one species in terms of physical and social needs may be different from those of another, and there are age differences. Therefore, what is crucial for an infant may not be as important for a juvenile or adolescent, and might actually be dangerous for an adult. Beyond that, there are individual differences among monkeys of the same age and background. Even in the best environments we could provide, such as this setting in rural Maryland where we keep most of our colony under naturalistic conditions, we still have individuals who present problems from a standpoint of their psychological well-being, and for the other individuals around them.

I want to talk about a subgroup of individuals and what characterizes their patterns or problems, including where these are coming from in terms of both heritable characteristics, biological underpinnings, and the effect of the experience. I am here to argue that even biological characteristics that are heritable can be altered substantially by experience, particularly early experience with attachment objects. The individuals I want to talk about make up about 10% of the population of our colony at NIH and about 10 % of wild populations of rhesus monkeys everywhere we have been able to observe.

These individuals' problems arise from the fact that they are impulsive. They do foolish things that get them in trouble. These situations generate fights, so that they exhibit a disproportionate amount of aggressive behavior. These animals, in addition to being impulsive, are also highly aggressive under inappropriate circumstances. This causes big problems for them and for those around them. I want to tell you about these individuals, what their background is, and how it characterizes this behavior. How does it change their development, not only on evidence of heritability, but also on what kind of early environmental changes or situations can influence the expression of the behavior or lack thereof?

I want to begin by giving you a little bit of background about what rhesus monkeys are like normally, how they grow up, and how they live. Then I will go into more detail about this subgroup and what we know about them. Rhesus monkeys in the wild are a highly successful species of old world monkey. They are probably the second most successful primates in the world after humans, even though they are not our closest genetic relatives; however, they do share about 94 % of the same genes we have. There are more of these monkeys living in the wild across a wider geographic range than any other species of nonhuman primates, with maybe one or two exceptions. They live all over the subcontinent of India in habitats that range from rain forest to hardwood forest, from savanna areas to the edges of desert, and even into the foothills of the Himalayas, where the winters are more severe than in North America. We have no problem keeping rhesus monkeys year-round in outdoor environments in rural Maryland with minimal shelter.

In the wild, and in those particular captive populations that so provide, these monkeys ordinarily live in large social groups called troops. The troops can range in size from 20 or 30 individuals, on the small end, to up to several hundred on the large end. Whether the troops are large or small they all have the same basic social organization. Every troop has several multigenerational female-headed families that make up the core of the troop. Every troop will have four or five unrelated older females and their daughters that make up the core of the troop, plus males who have come in from the outside. This arrangement derives from the fact that females stay in the group in which they were born for their entire lifetime, whereas males stay only until puberty and then they leave. They either leave voluntarily, or if they remain too long or are too obnoxious, they are physically kicked out of the group.

These males then join all-male gangs, hang out in the gangs anywhere from several months to several years, and then work their way into a new troop. Every troop will have plenty of adult males and adult females, but the females have been there from the beginning, and the males have all entered the troop postpubertal.

Within every troop there are multiple dominance hierarchies. There is a hierarchy between families, such that every member of the highest-ranking family, including infants, outranks every member of the next highest-ranking family including adults, who in turn outrank everybody in the third family, and so forth. There are situations in the wild where infants from high-ranking families might be stumbling along a path where the adults from lower-ranking families are falling all over themselves to get out of the way. They know if they cause those infant monkeys any grief, the rest of the hierarchy will be angered and intervene.

There is a hierarchy within families. The basic rule is younger daughters outrank older daughters. It is easy to see how that starts, because a mother will preferentially defend her newborn daughter from the harassment of an older sibling. That status relationship maintains for the rest of both daughters' lives, even after the mother is no longer around to differentially reinforce this. This is because other troop members pick up where the mother has left off.

There is a hierarchy among the males that come into a troop that is roughly related to tenure. That is, the longer a male has been in the troop, the more likely he is to be high-ranking. However, it is not tenure or length of time that is really important. It is how good that male is at making friends and sustaining alliances, not so much with other males, but with the powerful females who hold all the cards in these troops. Males that are good at this work their way up the hierarchy and stick around. Males that are not as good usually seek their fortune elsewhere.

For rhesus monkeys to survive in these complex social groups, not only do they have to develop very extensive and complicated social behavioral repertories, but they also have to acquire a great deal of knowledge about other troop members. Who is related to whom? Who have been getting into fights with one another recently? In the wild, mistakes in that area, such as confronting a dominant member of the troop, can lead to fights, which can lead to injuries. In the wild, with no veterinarians around, injuries often lead to death.

I want to take just a couple minutes to go through the sequences that youngsters pass through as they are growing up. Rhesus monkeys grow up about 4 times as fast as humans do. For those of us who are interested in long-term effects of early experience and lifespan development and the cross-generational transmission of characteristics, this accelerated rate of development is exceedingly useful.

Rhesus monkey infants, like all newborn primate infants, cannot survive on their own. They are totally dependent on their biological mothers for survival. Indeed, they spend about the 1st month of life in physical contact 24 hours a day, usually on their mother's ventrum or at no more than arm's length away.

In these circumstances, rhesus monkey infants not only get all the nourishment they need, assuming their mother is lactating normally, but they also get, through physical contact, psychological warmth and security, security that my mentor, Harry Harlow many years ago called, "contact comfort." Through this tactile contact, infants develop strong social attachments toward their mothers, much as John Bowlby has described for humans. In fact, much of Bowlby's attachment theory can be traced back to his observations with his friend, Robert Hinde, of rhesus mother-infant pairs, and his association with Harry Harlow at the time Harlow was doing his surrogate work. The fundamental principles of attachment theory, particularly the notion of a secure base and the forces that cause an infant to become attached to its mother, seem to be quite homologous across all of the higher primates.

In addition to staying close to the mother and getting physical and psychological warmth and nourishment, staying close to a mother has another advantage as well. Rhesus monkey mothers are picky about whom they let interact with their infants, and they are protective. By staying close to the mother, the infant is kept away from predators and from other troop members both within and outside the family, who might be interested in interacting with the infant. Mothers also keep males away. Even though males may be interested in infants, they have very little to do with the child rearing, at least early on. Mothers also keep non-family members away from their infants at this particular point.

Infants do not stay infants forever. In the succeeding weeks and months, these youngsters begin to leave their mothers for short periods of time to explore the environment around them. As Bowlby described for humans, they use their mother as a secure base to explore their environment. An infant will move away from its mother for a few feet, stay away for a few seconds, and then go running back for a period of contact. It will go scurrying out for some more exploring and then go running back to the mother for another period of contact.

As weeks and months go by, these exploratory forays become more frequent. They involve greater distances and greater amounts of time away from the mother, yet the mother's presence in the immediate environment is absolutely crucial to sustain this exploration. If the mother leaves the scene for one reason or another, the infant will become upset and afraid to explore. The mother's presence, even though she is no longer in physical contact with the infant, is absolutely crucial for sustaining the curiosity that will enable an infant to begin to explore in its environment. This relationship of mothers being an important secure base is maintained all through the childhood years.

As these youngsters start spending more time away from their mothers, they begin interactions with other group members. Paramount among these interactions is with peers. In the wild this is not completely by accident. Rhesus monkeys are seasonal breeders. That is, although they copulate year-round, the actual conceptions only occur within a 2- to 3-month period every year, probably due to seasonal variability in male sperm count. This means that 80 or 90 % of a troop's infants are born within a 2- to 3-month window. Any youngster born during that time will have plenty of other youngsters of exactly the same age with similar physical, cognitive, and social skills with whom to interact. They come to prefer interaction with peers over playing with inanimate objects or interacting with other monkeys in the troop, except their mother when they are frightened.

During the rest of the 1st year of life, and the 2nd and 3rd years of life, these monkeys will spend many hours every day in extensive play with peers. Every behavior that is going to be important for normal adult functioning is developed, practiced, and perfected before it has to become functional. Play, rather than being just a way for these monkeys to blow off extra energy and steam, provides an important socializing forum where adult behaviors can be perfected. This is particularly true about reproductive behavior, socialization, and aggressive behavior as it comes into these monkeys' behavioral repertories. Harlow's work and others in the 1960s shows that monkeys who were not given the opportunity to play with peers, even though they were otherwise well-socialized, inevitably had problems with reproduction and with control of aggression.

Play winds down for these animals as they approach puberty. For females this occurs during the end of the 3rd year when they have their first menses, and thereafter have regular 28-day menstrual cycles. For males, it occurs when their testes enlarge at the beginning of the 4th year and they start producing viable sperm. Both genders show a pronounced growth spurt and the genders go their separate ways.

Females stay in the group in which they were born for the rest of their life. They stay fairly close to their mother, both socially and in terms of physical distance. In the natural line of these female-headed families, the birth of a new infant is a major social event for the family. It has the effect of bringing all the other family members around the new mother and infant, serving as a buffer from harassment from other troop members and from other predators. Females will stay in their troop and stay active in family life for the rest of their lives, even after they may no longer be having infants of their own. Grandmothers and great-grandmothers continue to play important socializing roles in rhesus monkey family life.

The story for males is completely different. Males leave at puberty. They either leave voluntarily or they are kicked out of their group. These males then join all-male gangs for a while and then work their way into a new troop. We now know from very good long-term field data two essential facts about male emigration. First, it is the most dangerous period in the life of these males. There is nothing like it prior to or after puberty, and there is nothing comparable for females. The best field data tell us that the mortality rates for males from the time they leave home until the time they are successfully integrated into a new troop approaches 50 %. It is a rough world out there and about half the males do not make it.

The other thing we know is that males have different strategies for getting into a new troop once they have left home. In terms of the timing of leaving home, some males leave later than others. Some may try to fight their way into a new troop. They will identify dominant members of that troop, try to confront them and beat them up. If they are successful, they will be high-ranking from the outset and presumably share all the benefits of high dominance ranking, including contributing to the gene pool of that group. However, that strategy is extraordinarily risky because most established troops are not thrilled about having a young male come in and try to take over. The risk for that male of being attacked, wounded, and possibly killed in the process is high.

Other males take a much more conservative strategy. They will hang out on the periphery of a troop, make friends with low-ranking members, and then over a period of months and years, slowly work their way up the hierarchy of that troop. This is a less risky strategy from the standpoint of eliciting attack, but it has other problems. If a monkey is low-ranking for a long period of time, he will be the last to get food in a food shortage and the most likely to be picked off by a predator, or otherwise exposed to the elements. There is no one best strategy for emigration, and different males use different strategies with different degrees of success.

Once a male gets into a new troop he may stay there for the rest of his life, or he may stay only 3 or 4 years, pick up and leave, and try to join another troop. He may then switch troops 4

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or 5 times throughout the rest of his lifetime. We do not know for sure why some males stay in a new troop, while others stay a short time and then seek their fortune elsewhere. We suspect it has to do with how well that particular male is at moving up the new troop's hierarchy. Males who are not doing particularly well may leave. Independent of whether these males stay put or change troops several times, very few of them live beyond 20 years of age.

The same is true of females. Few females in the wild live beyond 20 or 21 years of age. In captive circumstances, where there is plenty of food and no predators, few parasites and veterinary care available; these monkeys can live to their late 20s or early 30s. At this point they essentially die of old age. Females under these circumstances will usually go through menopause in their mid- to late 20s. This means most females in the wild do not live long enough to experience menopause. Lest one thinks this is an artifact of captivity, the same was true for humans up until the last several centuries, and is still true in some parts of the world.

This is the sequence that rhesus monkeys go through from birth to senescence. They have been doing it for millions of years and millions of generations. They will do it for millions more if there is a decent habitat for them. They are exceedingly adaptive individuals. However, not all of them are as adaptive. Ten percent of the population is unusually impulsive and aggressive, causing problems for the rest of the social group.

Researchers working over the last decade, with rhesus monkeys, other nonhuman primates, and at the level of human clinical work with aggressive and violent patients and prisoners, have noted a relationship between this kind of behavior and levels of a neurotransmitter called serotonin. We can identify the metabolism of serotonin and monitor it by looking at the primary metabolite of serotonin, which is an inhibitory neurotransmitter. In cerebral spinal fluid there is the metabolite, 5-hydroxy-indoleacetic acid, or 5-HIAA, which is a good marker of serotonin metabolism. The overall consistent finding, in both the animal work we have done and increasingly in human studies, is an inverse relationship between serotonin metabolite concentrations and the incidence of this explosive impulsive type of aggression.

In the wild this characteristic shows up very early in life. It shows up particularly in the context of social play. Monkeys who have aggressive characteristics, who are otherwise impulsive, do not play well. They get into rough and tumble play bouts that escalate into real aggressive exchanges, and within a short time other group members begin to shun these individuals. They become essentially isolates within a social setting. Even at young ages there is an inverse relationship between aggressivity and 5-HIAA levels. In the wild these monkeys will also engage in some dangerous risk-taking behavior. They normally can jump from treetop to treetop. Occasionally, however, they make the wrong judgment, and miss their target. A dangerous leap for a rhesus monkey is a leap that is more than 15 feet in length and more than 12 feet above the ground. If he misses his target, it could be a problem.

There is still an inverse relationship between monkeys that do a lot of these leaps and their 5-HIAA levels. Monkeys with low serotonin metabolism are the individuals who exhibit this particular pattern. We have been able to study this characteristic in the lab carefully. We can make predictions about the risk for this characteristic by giving monkeys a monkey version of Brazelton examinations. Infant monkeys who are going to become impulsive and aggressive show very poor state control on the Brazelton within the 1st month of life. They also show very poor performance on the orientation cluster of the Brazelton. Monkeys who are going to develop aggressive and impulsive behavior seem to have deficits tracking moving objects in their visual field.

Predictive of low 5-HIAA levels and individual differences in 5-HIAA are remarkably stable throughout development even though there are major developmental changes. Individuals who had low levels at day 14 have low levels at 5 months. Animals who had high levels at day 14 had high levels at 5 months. Stability of individual differences continues throughout the rest of the childhood years into adolescence and adulthood. Under stable environmental conditions we can predict individual differences in adult 5-HIAA levels based on two levels collected when they were 2, 3, and 4 weeks of age, when the environment is held constant. This characteristic tends to be highly heritable, although it does not account for all variance.

When these monkeys are run through pet scans you also get big differences in brain activity. When you give a monkey a PET scan they have to be put under mild anesthesia. One would think that mild anesthesia would calm the brain down, and in fact, the animals with high 5-HIAA have relatively quiescent brains while under anesthesia. However, the brain of the monkey with low 5-HIAA is extremely active, even under mild anesthesia.

My colleagues from the Alcohol Institute, NIAAA, test these low 5-HIAA monkeys when they are adolescents, putting them through a monkey version of "Happy Hour." For an hour a day these monkeys can drink a 7 % Nutrasweet-flavored alcohol, or they can have a nonalcoholic Nutrasweet-flavored beverage, or plain tap water. Under those conditions monkeys with low 5-HIAA values drank heavily, consuming excessive amounts of alcohol.

There are a variety of behavioral and biological characteristics that differentiate these individuals from the other members of the group. What happened to these monkeys? If they are male monkeys in the wild, we know that bad things happen to them because they are obnoxious. Male peers and females avoid them. Females with children in the group do not like these males very much either, and so they conspire to drive these young males out of their troop well before puberty. Once they are kicked out of their group they lack the social skills to get into a new troop and even lack the social skills to get into an all-male gang. These males go solitary and most die within a year. The majority of them do not make it to reproductive age.

How can this characteristic remain in the gene pool if it is heritable and most of the individuals, at least in one gender who have that characteristic, are not making it to puberty? One possibility is a few males with these characteristics do survive and they breed like crazy, the old "silver bullet" hypothesis. We now know, however, that while it might be a nice hypothesis it is almost certainly not true. Peers do not like these monkeys. Adult females do not like these monkeys, and potential mates avoid them like the plague. The reproduction pattern with rhesus monkeys is a female's choice. A great deal of coordination must be made between male and female for successful copulating—rape is not an option. Thus, from both behavioral data and from DNA analyses, almost none of these males are making it into the gene pool. So, how does this characteristic stay around? There are low 5-HIAA females who are impulsive and also aggressive, just not quite as aggressive. They do not get kicked out of their social groups and they have children. It may be that this characteristic is being maintained through females.

There is another possibility as well. When we look at these females in terms of their maternal behavior most of them turn out to be lousy mothers. In particular they have very poor attachment relationships with their offspring. It may be that some of the behavioral and physiological characteristics that we see in these offspring are not so much a reflection of their mother's genes as they are of their mother's behavior towards them when they were infants. In a field situation, you cannot separate out these two possibilities, but in a lab it is possible to rear both high and low 5-HIAA infants away from their biological parents, either with cross-fostering or in another situation. That is what we have been able to do. Another peer, however, is not nearly as good as a real mother or even a poor mother in either reducing fear and soothing the individual when it is upset, or in serving as a secure base. Therefore, the attachment relationship that these peer-reared individuals develop is not normal. They are of the anxious sort.

When it comes time for these animals to start playing with peers, it is tough to be an attachment object and a playmate at the same time. Their play never becomes as sophisticated as that of their mother-reared counterparts. These monkeys are deficient in terms of their attachment relationships and they are deficient in terms of the type of peer relationships they develop. This differential rearing is only for the first 6 months of life. After that these peer-reared monkeys are put in with mother and peer-reared monkeys in one large social group. They all grow up in the same environment after that. Yet, even after they move to this environment, we see persistent long-term effects.

These peer-reared monkeys are unusually timid and shy, and they have many of the characteristics of Jerome Kagan's behavior inhibited children. They show a high cortisol response to mild stresses. As they get a little bit older, we start seeing evidence of this explosive, impulsive aggression coming into the repertory, often to the point where they have to be taken out of their social group. They are causing too much trouble and getting chewed up themselves as a result of this particular activity. As early as 2 weeks of age, all during the time of differential rearing, one finds peer-reared monkeys with lower 5-HIAA levels. This is not caused by genes; this is a result of early experience. Even after these animals are together in social groups there are still rearing-condition differences. Even though the 5-HIAA levels show developmental changes by the end of the 1st year, or by the end of the 2nd year, there is still a significant difference in these levels.

What else do we know about these peer-reared monkeys? When they get into the "happy hour" situation, they are the ones who drink like fish. They consume much more alcohol under these arrangements than their mother-reared counterparts. One consequence of peer rearing is to make these monkeys more impulsive, more aggressive, and presumably have lower 5-HIAA values than they would ordinarily. The alcohol findings also indicate that these monkeys show greater tolerance, and develop greater tolerance quite quickly.

The question of tolerance led us to establish a collaboration with Peter Lesch, a psychiatrist and epidemiologist at the University of Wurtzburg, who has been studying highly aggressive humans. He, along with his colleagues, has found a particular gene called the serotonin transporter gene. This gene is involved in the regulation of serotonin at the level of the synapse. In humans, apes, and monkeys, but not in other primates or mammals, there is a polymorphism in this gene. The polymorphism is in the promoter region, where there is a short version and a long version of the gene. The difference between the short and the long is about 25 base pairs. In invitro studies of the transcription of DNA into RNA, there seems to be less efficient transcription of RNA associated with the short version of the gene relative to the long version of the gene. This is true in humans and in Rhesus monkeys. There is a difference in polymorphism associated with this gene. The suggestion is that this short version might be involved in the serotonin deficit situation. The human data are very mixed on this. Groups like Lesch's find consistent relationships between the short version, psychopathology, and serotonin. Other investigators have failed to replicate this or essentially find nothing.

We have been able to type our whole monkey colony out at the animal center. There are animals with the short version of the gene and animals with the long version of the gene. Some of the monkeys who were reared with peers have the short version of the gene and others have the long version. Some of the monkeys who were reared by their mothers have the short version and others have the long version.

The question is, does it make a difference which gene you have or which version of the gene you have? The answer is that it does matter, but it also depends on the environment. Looking at the serotonin metabolism, or at 5-HIAA levels, if a peer-reared monkey has a short version of the gene there is a deficit in serotonin metabolism. If a monkey has the long version of the gene, his/her metabolism is slightly more efficient. In mother-reared monkeys it does not make a difference which version of the gene they have. Their serotonin metabolism is normal.

What about alcohol consumption? If a monkey has a short version of the gene and is peer-reared, he/she drinks like a fish. If a monkey has the short version of the gene and is mother reared he/she will actually drink less than normal. What is a genetic risk factor under poor early rearing turns out to be perhaps a protective risk factor under good early rearing. Gene environment interactions can be picked up as early as our Brazelton data. Nursery-reared monkeys with the long version of the gene and the short version of the gene have a large genetic effect. Again, with deficits in individuals with the short version of the gene, mother-reared monkeys' orientation behavior is not affected by what type of gene they have. This is another example of buffering or the effect of good early experience.

What does all this mean? My colleagues at NIH who have just triumphantly announced the completion of the genome think all the important work is done. I would tell them they are kidding themselves. Everywhere we have looked, not just with this gene, but with a couple of other candidate genes, what we found is that peer-genetic effects and peer-environmental effects are the exception. We are seeing many gene-environment interactions. They occur all over the place in different dimensions. There is going to be a lot of hard work to be done if one wants to understand development at the level that we are talking about, unraveling these gene-environment interactions. It means doing long-term longitudinal studies with different strains or different genetic types under different environmental circumstances.

What I have been talking about so far is what happens to these monkeys if they have poor early experience. What happens if a monkey has a good attachment figure? We do not have that answer yet for monkeys who have this short gene or who have other evidence of a predisposition to become impulsive. However, we have done cross-fostering studies looking at super-attachment relationships with another sub-type of monkey, the shy nervous individuals, who again, remind us of Jerome Kagan's inhibited children. We have found over the years that if you cross-foster these infant monkeys at high genetic risk for developing excessive fearfulness and anxiety-like behaviors with super-nurturant foster mothers, one actually sees a remarkable change. Super mothers or foster mothers are individual females who, when they take care of their own children and foster children, are unusually good in providing a secure base for their infants. They are always there for their infants when they come back from exploration. They encourage these infants to go out and explore. During the time of weaning, all monkey mothers punish the children to some extent. Some punish almost to the point of abuse, while others are so wonderfully subtle that one can barely tell that punishment is happening. Super mothers are unusually tolerant during the weaning period, and they will put up with things that most mothers would not tolerate for a moment.

What happens when you cross-foster these individuals, monkeys at high risk genetically to develop anxious type behaviors, with one of these super mothers? Wonderful things happen. They turn out to be precocious. They start exploring, moving away from their mother, not only earlier than high-reactive or high-risk monkeys cross-fostered with normal foster mothers, but even earlier than low-reactive monkeys cross-fostered with either type of mother. When it comes to the time of weaning, when there is a lot of disturbance and upset, high-reactive infants cross-fostered to these unusual foster mothers show lower levels of upset and abnormal behavior, not only lower levels than their high-reactive counterparts cross-fostered to normal mothers, but even lower than their low-reactive counterparts cross-fostered to either mothers.

As these monkeys get older, they become unusually adept at making alliances, probably lessons they have learned from their mother. They learn to avoid bad situations, and if they do get in trouble, to recruit help. These monkeys end up at the top of their dominance hierarchy, whereas those with the same genetic predisposition who are cross-fostered with normal mothers usually end up at the bottom of the dominance hierarchy. When females with this predisposition, who are cross-fostered by these unusually nurturing foster mothers, start having children of their own, they adopt the mothering style of the foster mothers. They pass the advantage they accrued with this nurturant foster mother, through nongenetic means, on to the next generation, to their own children. This is a mechanism by which one has this advantage pass from generation to generation, even though that genetic risk might still be there.

We are in the middle of a cross-fostering study looking at the same phenomena with high- and low-aggressive or impulsive monkeys. Although the data is not in, early results are promising and seem to be going in the direction that we got in this earlier study. We now have the opportunity to study in more detail the very mechanisms by which these early environmental events are affecting things all the way from behavior to physiology to gene expression. When we understand these interactions, it presumably will assist us in tailor-making environments for individuals with particular needs. It is our hope that our work with Rhesus monkeys may give us some insights at the human level.

Luncheon II

INTRODUCTION OF KEYNOTE SPEAKER:
Sarah M. Greene
Chief Executive Officer
National Head Start Association

KEYNOTE SPEAKER:
Valeria O. Lovelace

It's 2000 and Parents Are Still Saying "No" to Friends Who Are "Different"

Valeria O. Lovelace, Ph.D. is President and Founder of Media Transformations, an educational research company dedicated to the creation of projects that promote kindness, equality, respect, and love among young people around the world. Clients include: Nickelodeon, CTW, MSNBC, Kellogg Foundation, Just Us Books, Markle Foundation, Carnegie Corporation, independent producers, writers of children's books, school districts, and religious organizations.

Each Media Transformations project provides children with diverse role models who seek knowledge, persist in the face of difficulty, strive for excellence, and contribute to the well-being of their families, friends, neighbors, and the world community. In the past three years, projects have included: the MSNBC and Scholastic special with teens, "The Racial Divide" in 1997; Courtney's Birthday Party, *by Dr. Loretta Long, 1998; race relations focus groups with teens around the country for the Kellogg Foundation, 1999; a workshop at the National Black Child Development Institute with Dr. Loretta Long in October, 1999 on interracial friendships for parents and caregivers; and the upcoming debut of* Dora the Explorer, *a preschool internet and television animated series. This program about a Latina girl will premier on Nickelodeon in October, 2000.*

Previously, Dr. Lovelace was Assistant Vice President and Director of Sesame Street *Research for 14 years. She coordinated the development of curriculum goals in reading, writing, math, science, music, geography, computers, and a 4-year race relations initiative. She also provided guidelines and research for plot lines addressing death, love, divorce, adoption, and voting. She has just completed a chapter with her colleagues at the Children's Television Workshop highlighting some of these formative research studies and the role that this research has played in the success of* Sesame Street. *This chapter will appear in an upcoming book to be published this year celebrating 30 years of research on* Sesame Street.

Dr. Lovelace has lectured nationally and internationally in the areas of preschool research and curriculum development, race relations, and educational, prosocial television. She serves on the Advisory Panel on Educational Television, Annenberg Public Policy Center, University of Pennsylvania, the Educational Advisory Board for SHINE (Seeking Harmony In Neighborhoods Everyday), the Advisory Board for Nick Jr. Magazine. *She is currently teaching early childhood at Bergen Community College.*

Sarah M. Greene: I have the pleasure of presenting to you, Dr. Valeria O. Lovelace. Valeria is president and founder of Media Transformations, an educational research company dedicated to the creation of projects that promote kindness, equality, respect and love among young people around the world. Clients include Nickelodeon, CTV, MSNBC, The Kellogg Foundation, Just Us Books, Markle Foundation, the Carnegie Foundation, independent producers, writers of children's books, school districts, and religious organizations.

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Valeria O. Lovelace: It is truly a pleasure to be here. I was here 4 years ago and it is an honor to come back again to talk to such a wonderful group of people who are dedicated to working with young children, and improving the quality of research for our children. Therefore, it is exciting for me to come back and share with you some of the things that I have learned over the last 4 years.

I also would like to personally thank my mentor, Dr. John Hagen for always being there for me and encouraging me throughout my undergraduate and graduate career, and also as I went through my professional development.

I would like to start with the song, "If I Had a Hammer." For some of you this is a new song. For others it brings back memories of long hair, Afros, and Peter Paul and Mary. For still others, it may remind you of Pete Seeger's original 1946 version. It is an exciting song about America and a dream of unity, and our desire for tools to make this a reality.

In preparing for this talk I listened to a lot of music for children, especially music that focused on peace and diversity. On one of the tapes, the last verse of this song had been omitted. I was shocked. How could the producers say no to the passing on of this important verse to our children? Who would leave the children thinking that there was danger and warning, and we lacked the tools to fix it? Who would say no to the hammer of justice? Who would say no to the bell of freedom? And who would say no to the love between our brothers and sisters all over this land?

This is the answer. This is the solution, isn't it? Unfortunately, this omission would not surprise our children. In our research, children are aware of the negative messages about diversity that are in our society. Preschoolers, elementary, and high school students regularly report the negative feelings that parents have about friends who are different. Many parents, on the other hand, contend that it is just not so.

In 1989, at Sesame Workshop, formerly Children's Television Workshop, we launched a 4-year race-relations curriculum on Sesame Street. This initiative was designed to be more explicit about physical and cultural differences and to encourage friendships between people of different races and cultures.

Over the 4 years, we conducted research with over 600 preschool children—African American, Puerto Rican, Chinese American, Crow Indian, and White children. Working with advisors from each group, we developed goals to address specific needs for each group, and general goals. For example, the American Indians desperately wanted people to know that they are alive. So we created a goal that told children that there are over 400 tribes that are still in America. For Latinos, we wanted children to know additional Spanish words, but we also wanted children to know that all languages are good. For Asian Americans, we addressed issues of discrimination because of eye shape, dress, and the issue of name-calling. For African Americans, we looked very closely at the issues of skin color.

We learned that the majority of the children felt good about themselves. Furthermore, the majority of the children wanted to be friends with children of different races. However, the majority of the Puerto Rican, Crow Indian, Chinese American, White, and African American children reported that their mothers would be sad or angry about these friendships.

We also found that when children were given the opportunity to create a neighborhood, the Crow Indian, Chinese American, African American, and Puerto Rican children integrated the two houses, the two schools, the two playgrounds, the two churches and the two stores that they were presented with. By the age of 5, White children segregated African American and White children in all structures.

I would like to play a videotape of that research produced by Children's Television Workshop so that you can actually see the children.

> These are just a few of the children who make up our world. They are the same in many ways, and different in many ways. But how do they feel about each other? Do they understand the racial differences between them? Would they use these differences to make decisions about people and their world?
>
> In our studies with these children we found many similarities. However, we also encountered differences that needed to be addressed. How is it possible that when asked to separate photos into two piles, one containing Black children and the other White children, this Caucasian female accomplished this sorting task with ease? Yet, this African American female placed both Black and White children in both piles. Research shows that race is not a factor in sorting abilities. So what contributed to these differences?
>
> Across our studies, both the African American and the Caucasian children responded similarly. However, when these children were given the opportunity to structure a neighborhood by choosing pictures of Black or White children, the majority of the 5-year-old Caucasian children segregated all the buildings, while the African American children did not.
>
> All of the children knew who was the rejected child in this scenario. Half of the children were able to name at least two different strategies they would use when faced with a situation of rejection. Almost all of the children in the study said that they would play with the rejected child. According to the preschoolers, people who are in jail or on drugs could be either Black or White. However, the preschoolers agree that the people who are rich are White and the president will be Black.
>
> We want to thank these children for sharing their feelings and for telling us about their experiences. We have learned a lot. Now the question remains. Is there anything else that Sesame Street can do in the area of race-relations?

To better understand the findings from the neighborhoods, we went out to 5-year-old White children and we told them a story. We told them about a group of White children who were given the opportunity to put Black and White children together, and that they separated the White and the African American children. We asked them, what do you think about what they did?

The children agreed that they did the right thing. They said that in fact, the children would be sad about it, but they explained that there are several reasons why they should separate the children.

First of all, they are different colors. One house is small and one is big. Once they get older they hurt each other. Black people live on one street and White people live on another street. My teacher told us that Black people live in one house and White people live in another house.

Based on these findings we created two play dates, one with boys and one with girls, between African American and White children. In both cases children felt very positive about these visits. But when we asked them how the African American mothers who appeared in the films felt about the visits and how the White mothers, who did not appear in the films, felt about the visits, less than half of the children said the mothers were positive.

This challenged us. So we recommended that future segments involved parents holding conversations before and after the visits to show discussions between parents and children that were supportive of these friendships between children of different races.

In 1998, Loretta Long, who plays Susan on Sesame Street, came to me with a draft of a new book she was writing about a friendship between an African American and a White girl. Of course, my first words were, "Let's test it."

We held focus groups with 7-year-old African American, Puerto Rican, Asian, and White girls. What I would like to do is look at some of the pictures and some of the text from this book.

> Courtney's Birthday Party, by Dr. Loretta Long, and illustrations by Ron Garnett.
>
> [Lovelace sings] "Seven, seven, seven will be just like heaven. In 6 days I'll be 7, in 6 days I'll be 7."
>
> Courtney Crowley and Diana Davis were best friends. They lived in the same town, went to the same school, and were in the same class. They liked the same things—dinosaurs, jacks, and sunflower seeds. In just 6 days they would even be the same age.
>
> As soon as Diana got home from school she told her mother about Courtney's party. "Please say I can go, mommy."
>
> "You've been invited?"
>
> "Courtney said the whole class can come— plus I'm her best friend…so can I go to the party?"
>
> "We'll see."
>
> "Seven, seven, seven will be just like heaven, in 5 days she'll be 7, in 5 days she'll be 7."
>
> Courtney's job was to put stickers on the envelopes right below the names. Jeannine Anderson, Nicholas Buckley, Brandon Cross, Lauren Davenport, Ryan Rimes, Theresa Mulligan, Melissa Owens, Steven Post, Howard Robins, Gabriel Townsend, Judd Wooster. That was it.
>
> "Mommy, you forgot Diana Davis."
>
> "I didn't make an invitation for her. I don't think she'll fit in dear."
>
> "What do you mean, mommy? She fits in at school."
>
> "This is different Courtney."
>
> "What's different? Diana's my best friend. She's got to be at my party."
>
> Diana greeted Courtney at school.
>
> "You've got the invitations. I'll take mine now."
>
> Courtney said nothing. She just looked sad.
>
> "You mean, I can't come to the party?" But i got you a present and everything. I thought you were my friend. My best friend."
>
> "I am."
>
> "Courtney, your friends are waiting for you, it's your birthday."
>
> "Seven, seven, seven will be just like heaven, 7, 7, 7, today we both are..."
>
> Suddenly tears streamed down Courtney's cheeks.
>
> "Don't cry. I'll see what I can do."
>
> R-i-n-g-g-g-g-g-g!
>
> "It seems I made a mistake with the invitations, Mrs. Davis. What I mean is, uh, well, that Diana should have been invited. Courtney is very unhappy. I don't think she'll have a good party if Diana's not here. I didn't realize they

> were best of friends…I know it's short notice, but can Diana come to the party?"
>
> "Well, I don't know. Diana and I have plans. But let me ask Diana."
>
> "Yes, yes, yes, yes!"
>
> "I can pick her up."
>
> "That won't be necessary. I'll bring her."
>
> "Before we go, Diana, we should have a little talk. Some people want to be with people who look like them. At work and at school it's difficult to avoid people who are different. But in their homes people can invite whomever they want."
>
> "I think I know what you mean, mommy, but Courtney is not like that. Courtney and I know we are different on the outside, but we are the same on the inside."

After hearing this book, children expressed strong feelings about Diana not getting an invitation. They were delighted when Courtney's mother made the telephone call, but children were not surprised by what happened because it had happened not only to the African American girl, but to the Asian, Latino, and White girls.

They recalled that it had happened 2 times when friends who lived next door could not visit because their moms said no. Yes, at school, they were best friends. One African American child said it does not matter what color you are. You should not judge people by the color of their skin. Children predicted that Courtney and Diana would have a sleepover in the future, now that their mothers knew each other.

Last summer we had the pleasure of working with the Kellogg Foundation and listening to the voices of teens across the country in focus groups. Over 100 teens gave their opinions about race relations. They identified parents as the number one influence on their friendships with children of different races and cultures, far more than the influence of peers.

One teen said, "The way you were brought up and where you come from determines whether or not you're a racist. Your parents will say this certain group of people, they're bad news. I don't want you hanging out with them."

A Vietnamese American youth discussed her mother's negative reactions to her dating someone of mixed African American and White descent. This teen wrote a letter to her mother asking her to respect her ability to be tolerant, and requested that she be allowed to move more freely between racial groups.

Since the 1940s, research has documented the need for positive attributions to be associated with Black dolls. When children are told by adults that Black dolls are beautiful, nice, and clean, their play behavior with Black dolls increases. But in many homes, diverse dolls are not given to children. We know that this is the place where children from infancy make positive attachments to objects. If there are no Black, no Brown, no Asian dolls in children's home environment, how can they create in their play this loving community that respects and celebrates diversity?

In conclusion, Pete Seeger had it right in that last verse. We do have a hammer: hammer of justice. We can make sure that children are treated fairly and stand up for inclusion. We do have a bell: bell of freedom—freedom that we can give to our children to make friendships. We can say positive things about their friendships and get to know the parents.

We do have a song to sing about love between our brothers and our sisters, when our children from infancy are given by smiling parents diverse dolls to love, to admire, and play with so that they can begin to create this loving America. As Gandhi said, "We must be the change we wish to be."

Friday Student/Mentor Brown Bag Lunch

Head Start Research Grantees presented their research in a poster display. Life-long mentors were honored.

John Hagen: On behalf of the program committee for this 5th National Head Start Research Conference, I am especially pleased to welcome you to this new event, the Student/Mentor Lunch. The posters you see around the room are from research done by Graduate Student Head Start Research Grantees. We encourage you to look at these posters and talk to the students.

It has been a challenge at each of these conferences to come up with new ideas. For this conference, the program committee was unanimous in deciding that we should do something to both encourage student participation and to have more formal recognition of students, since they are the future in our field, as well as in every field. Cooperating organizations were asked to sponsor students, and many of them not only provided free registration but actually donated funds for travel. Senior professionals were asked to have their students submit proposals for the program. For those whose work was accepted, we were able to obtain financial support to help facilitate their participation at the conference. Finally, we approached universities in this area and asked faculty there to nominate undergraduate and graduate students to attend the conference. Many are here today through that effort.

We all know that mentoring is indeed an important but yet not terribly well understood phenomenon. Currently, I am on a dissertation committee for a graduate student who is in our combined program in education and psychology at Michigan. This student's dissertation looks at mentoring. Prior to this, I did not realize that mentoring, at least in terms of formal literature, began in the business world. Most of the early studies were on mentors and mentees in business settings; mentors were almost always White males and somewhat older than the mentee. In more recent years, we find mentoring at many different levels. Big Brother and Big Sister programs have been around for many years, but only in recent years have they been conceptualized as mentoring programs as well. Many universities now have freshman mentoring programs, so that incoming freshmen have either faculty or staff mentors or sometimes more senior student mentors.

A few years ago, I saw a study by APA that found that each of us during our career should produce 2.2 Ph.D.s in order to keep the pipeline going. I realized last year that I have now served on 150 dissertation committees—I think I have overachieved. During my own career, my roles as a mentee and then as a mentor have been the most rewarding parts of my experience.

The program committee decided that because the role of mentoring is so important in our fields, that beginning at this conference, we should honor individuals who have played especially important roles in mentoring.

Those of us in child development realize that our field has a unique history, different from many of the other academic fields in that we were founded on the belief that research and practice have to go hand in hand and that basic and applied research are coequal and that we learn one from the other. It means that people have to be involved in the real world as well as in the academic world. The individuals we have chosen to honor with this mentor award have certainly exemplified these beliefs.

Our first honoree, Urie Bronfenbrenner, was unable to attend this conference due to a family illness, although he has been at several conferences in the past. Urie played an important role in the first Head Start Research Conference. I will now ask Dante Cicchetti to come forward to present the second award.

Dante Cicchetti: It is my pleasure to be here to present an important award for being an outstanding mentor to someone who I love and care for deeply, Edward Zigler. I would like to say a few words about some of Ed's contributions to the field, talk more specifically about what makes one a great mentor, and give you some personal experiences that I have had from being mentored by Ed over the years.

For Ed Zigler, the scientific study of children has been a lifelong passion in which he has immersed himself totally. He has immersed his heart, soul, and mind into the major issues that concern science, practice, and policy in relation to children and families. He has forged a new field, integrating developmental psychology, developmental psychopathology, and social policy, in which he has mentored and fostered several generations of leading scholars and policy advocates.

His contributions to the field have been mind-boggling. He has proven that a person can be a great scientist, clinician, and policy advocate and still be a great mentor, taking the time and caring to do this. In the field of developmental psychology, his contributions to theory, method, and development of national policy concerning children are legendary. He has worked with both normal and atypical children and has led by example. When I was a graduate student, it was not cool to be studying both clinical and developmental psychology—a student chose one or the other, science or practice. Yet, here was one of the leaders in our country, leading by example and urging and encouraging students to follow in his footsteps.

In his studies of mentally retarded individuals, Ed emphasized that they were first and foremost children and adolescents who shared with other children and adolescents an understandable course of development. Their behavior and thoughts and feelings were influenced by the same factors of concern and care from having committed parents and other adults in their lives. He brought the study of mental retardation into the mainstream of the study of child development. His work on institutions and on motivation, personality, and developmental theory humanized individuals with retardation and placed the spotlight on their socialization and adaptive capacities, as well as their understandable psychological difficulties.

Ed Zigler also has done important work on applying a developmental perspective to more serious forms of mental disorder, such as schizophrenia, bipolar illness, depression, and substance abuse. As is true in all of his work, he focused on the importance of the whole person; a lifespan perspective. He believed that even persons with mental disorders phase in and out of periods of normalcy and psychopathology, and of course, that they should be treated and perceived humanely. His work in this area helped to combat stigmatization of mental disorder, which is still one of the most important issues, if not the most important, facing the field of psychopathology today.

Ed's work on child abuse moved the field past early parent psychopathology models to an incorporation of a developmental perspective. He fought to help children who have been abused and neglected and to mentor many individuals, such as Larry Aber and me, who went on to make contributions to the field of child maltreatment. Ed Zigler, Norm Garmezy, Michael Rutter, Alan Sroufe, and Tom Achenbach are probably the major leaders and contributors to the formation of the newly emerging, by now emerged, field of developmental psychopathology. His 1986 book with Marion Glick on adult developmental psychopathology is one of the truly great examples of applying the developmental perspective to serious mental disorder. Of course, the reason that many of us are here today is his contributions to Head Start, which are legendary. His vision, honed by clinical insight, theory, science, passion, and concern for children, has shaped the entire course of our nation's policies concerning families, children, early intervention, and the role of schools. That just gives you some sense, in a brief period of time, of what Ed has accomplished.

One of my mentors in graduate school, Paul Meehl, once told me that perhaps the major legacy for a professor is his or her students—the product, so to speak, that one leaves behind to move forward in the field. When one looks at Ed Zigler's students, they clearly go way beyond the walls of Yale University. He has a family of students. In fact, people now talk about universities without walls; Ed Zigler is an example of a mentor without walls. Many of the leaders in the field, indeed many people in this room, have experienced the mentorship of Ed Zigler, either as his Ph.D. student or, like me, as someone from another university who he mentored and has continued to mentor for the last quarter century.

What are some qualities of a great mentor? These thoughts come to mind: kindness and compassion, loyalty and commitment, and motivating people to strive to be their very best and go beyond their comfort zones. There is also a lifespan mentorship; it is not just when you are in graduate school getting your Ph.D. Mine, for example, has been for 25 years or more—almost like a cradle to retirement mentorship. A good mentor is there for good times, tough times, and crises. A good mentor instills the importance of good mentoring to his or her mentees. A good mentor leads with honesty and integrity, by not pulling punches and being able to provide critical feedback when necessary.

A good mentor will encourage you to pursue your passions and not to shift with the tide by saying there is funding this year in a specific area and to do that research. That is not how one makes a substantive contribution. One has to not even care about where there is funding and move forward in what one believes, assuming that you have good reality testing and can see the cards in a lucid fashion. A good mentor will help teach you that.

Good mentors also practice what they preach. Just as Ed has a whole person perspective on the study of development, he also has a whole person perspective on the mentoring process. A good mentor cares about the future of the field. Therefore, a good mentor will help young people regardless of where they matriculate in graduate school. They will teach through example how to mentor and the importance of mentoring, leading to a positive intergenerational transmission of good mentoring.

I would now like to share some thoughts about my personal experiences with Ed. I met Ed for the first time in 1975. I was a graduate student at Minnesota in the clinical program, where Paul Meehl was my clinical mentor and Alan Sroufe was my developmental mentor, and I was very close to Norman Garmezy. Norm and Ed are good friends, and I wanted to meet Ed because I was doing work in the area of retardation. I was kind of scared. This man had made all of these contributions, and I wondered if he had ever read anything I had done. I had been at SRCD and published a few papers—I thought, like big deal. Yet when I met Ed, he knew my work and who I was and encouraged me. I sat down and spent time with him—like the purpose of this lunch. The young students here are getting to meet some senior mentors who they are not going to forget, like a little child getting an autograph from a star athlete.

Ed was incredibly there for me, and it did not end there. Several years later, I was a professor at Harvard, and one of Ed's students from Yale came there to finish his studies. Ed asked me if I would help with his dissertation, and Ed and I working jointly with this student, Larry Aber, on his dissertation. One of the important things Ed does is to put people in touch with other people to make them better than they are. The collaboration with Larry, along with Ross Risley, continued because we all wanted to start doing research in child abuse. None of us had ever written grants. In fact, at that point, I did not even know how to write a grant. So the three of us drove from Cambridge to Yale where Ed gave us all feedback and taught us how to write grant proposals. Ed also served on that Harvard child maltreatment project and for years later, including some of my early years in Rochester, when I again began to have difficulties getting grant funding, Ed would read my grant proposals and give me feedback and help point out what I needed to do to get back on track. I have that much confidence in him and he in me to be honest with each other. This has gone on for probably 12 to 15 years.

When I wanted to start the journal, *Development and Psychopathology*, many people said, "No way, we do not need another journal in the field; forget about it." Ed, however, supported that venture and stuck by me. The journal is doing well, but without people like him encouraging me and others, the field might not be as far along as it is now.

He has concerns, as I said, for the personal as well as the professional. He taught me a couple of things, one of which he repeated again at lunch. All of us can feel that no one where we work really respects us, and Ed has always taught me "you are never a prophet in your own home town." My problem is that I do not go to that many meetings. I do not mean to embarrass myself by saying this, but I want to point out how a person can deal with that. I am not going to reveal all the details, but there have been a few occasions where Ed has had to give me some fatherly advice. In 1985 at SRCD, I was introducing Norman Garmezy. I was really pumped up because I love Norm. I was wearing a red shirt, and although I did not know about it, apparently some people thought it was inappropriate for me to be dressed that way when I was introducing Norm Garmezy. Ed basically asked, "Why do you dress like that?" I told him, he respected my answer, and it has never been an issue again. The point is he confronts you, but in a caring way. He did not want the way I dressed to interfere with my being successful.

On many levels, more than my two Ph.D. mentors, Ed Zigler has influenced my career pathway and trajectory. He also gives unwavering support. He has talked about the importance of integrating and translating across the different cultures of science, policy, and practice. He instills importance in work. When you hang around Ed it is hard not to feel like, "Wow, I am doing something that is incredibly important."

It bothers me when I think about the publication lags in the field of child development and psychology, and I compare them to the lags in natural science. I am not a publisher so I cannot speed them up, but it seems to say that what we do is not as important as what is going on in other fields. That is not true. Our work is as critical and, in many respects, pertains to life or death matters as much as does research in other fields. It is a different kind of life or death, but it is there.

Ed has always been able to provide environments that are exciting. Students who work with him believe that what they are doing is important. That is what I have experienced through Ed and tried to perpetuate with people who have worked with me. I am sure those of you who have worked with Ed have gone on to do similar things.

I consider Ed Zigler the greatest developmental psychologist in history. There is no one who compares. There is no one who has done what he has done on multiple levels and put it together. I know Ed dislikes receiving tributes or accolades, but Ed, all of us whose paths you have crossed, and whose life and work you have touched in deep ways, both directly and indirectly, we in unison—not just me here today but all of us, including those who could not be here—bestow this lifelong mentor award upon you. We thank you so much for caring about us.

Edward Zigler: Thank you, Dante. I am not good about awards. I want to make two points and get out of your face. First, to my colleagues, the other mentors around the room, I want to comment on what students are and what your responsibility is to them. I do take a whole person perspective in everything I do. When that student walks into your office, one does not have a candidate for a Ph.D. One does not have a dissertation one wants to get through. One has a real live human being with wonderful attributes. Most of our students are great. They also have problems, and one is supposed to help them. However, some of you do not. One is not finished mentoring when the students graduate with that sheepskin. One has them for life, and they move from being a mentee to becoming a friend. That has always been important.

My second point is that in my lifetime I have met a half dozen people who are truly brilliant. Paul Meehl was one of them. I want to underline his wisdom. I have been lucky. I have had the opportunity to do many things. I have moved between the world of knowledge and the world of policy, and I did try to help create a field of child development and social policy. It bothers me that our knowledge base, all that we know, is not utilized properly in policy constructions. We are all too modest. We know more about children and families than anybody. Our knowledge base gives us the right to have a bigger voice in policy construction than we typically have. I have been fortunate. I have had a hand in inventing Head Start and Schools of the 21st Century. I am proud of all of that. I look at these accomplishments and they please me. However, when the final history of Ed Zigler is written, it is going be my students that are my most cherished legacy. They have taught me, and I hope I have taught them. Thank you.

Hagen: From this presentation, one might infer that Ed came to us through immaculate conception. However, he had a mentor too. Actually, I am sure he had many, but my friend and colleague Harold Stevenson was Ed's mentor in graduate school at the University of Texas. I bring special greetings and congratulations from Harold and Nancy to Ed.

Graduate Student Head Start Research Grantee Posters

PRESENTERS: Dana H. Abbott, Sandra Barrueco, Jennifer E. Burke, Barbara Conboy, Judith R. Guerrero, Jason T. Hustedt, Deborah A. Hwa-Froelich, Lisa Lopez, Greta Massetti, Christine McWayne, Kathleen M. Murphy, Sandra Vargas Perez, Jane G. Querido, Sharon Switzer, Margery Szczepanski, Marilyn Anita Vestal, Carol E. Westby

Using Action Research Methodology to Promote First and Second Language Acquisition in Head Start Preschool Classrooms

M. Jeanne Wilcox, Catherine Bacon, Kathleen M. Murphy, Shereen Thomas, Carolyn Weber

Among young children perceived as "not ready to learn" upon school entry, teachers consistently identify language deficiencies as a primary problem (Hart & Risley, 1995). There are two groups of young children who face primary challenges in the acquisition of language-based readiness skills: (a) children who speak languages other than English in the home and (b) children with communication or language disorders. Although research has demonstrated that young children's language development can be promoted through implementation of evidence-based language facilitation strategies in preschool classrooms, recent analyses of educational practices found that research databases have a limited influence on classroom practices. Efforts to enhance the linkage between research and practice have intensified, and one of the promising approaches identified is the research action method. This poster describes how research action methodology was used to promote implementation of evidence-based language facilitation practices in three Head Start classrooms located in Phoenix.

The implemented action research method was conceptualized in three phases, including: (a) focus groups to identify key issues and desired outcomes regarding practice improvements and changes, (b) formation of research action teams in each of three participating Head Start classrooms to develop and implement plans for integrating new practices into pilot classrooms, and (c) identifying the necessary modifications in teaching practices in order to achieve goals. Each research action team included a parent research partner, university researcher, classroom teaching staff, and consulting speech-language pathologists. Regularly scheduled meetings served as the mechanism for: (a) identifying evidence-based practices that facilitate children's language abilities, (b) evaluating the usability and effectiveness of implemented protocols, and

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(c) making modifications to the process as needed. A combination of qualitative and quantitative measures were collected during the school year to address the extent to which the action research model promoted use of evidence-based language facilitation practices by Head Start personnel and the extent to which children demonstrated gains in their language skills.

With respect to Head Start personnel practices and the classroom environment, pre- and posttest measurements were compared from two data sources, the Early Childhood Environment Rating Scale-Revised (ECERS-R; Harms, Clifford, & Cryer, 1998), and analyses of teacher talk made from classroom videotapes (adapted from Smith & Dickinson, 1994). Results suggest modest improvement in type of activities and interaction as measured by the ECERS-R (Harms et al.); no changes were noted in teacher talk analyses. However, subjectively, teacher participants reported that the regular meetings and implemented activities were beneficial and that the information about language development was valuable.

With regard to the children, a total of 15 children participated, 5 children randomly selected from each of the three classrooms. Seven children had speech/language disorders and 8 were typically developing; 8 children spoke primarily English and 7 spoke Spanish. A comparison of formal and informal tests of language abilities included language sample analyses, Preschool Language Scale-3 (Zimmerman, Steiner, & Pond, 1992); Peabody Picture Vocabulary Test-III (Dunn & Dunn, 1997); and Expressive Vocabulary Test (Williams, 1997); or Expressive One Word Picture Vocabulary Test-Revised, Spanish Edition (Gardner, 1990); and Test De Vocabulario En Imagenes Peabody (Dunn, Padilla, Lugo, & Dunn, 1986). Results suggest children's receptive and expressive vocabulary knowledge improved in their primary language, Spanish speakers' receptive English vocabulary increased, and general language skills were relatively unchanged.

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Peacemaking in Head Start: How Do Preschool Children Learn Conflict Resolution Skills?

Marilyn Anita Vestal

The PEACE Project study asks whether conflict resolution skills can be effectively introduced to preschool children through a teacher-training model that demonstrates to teachers how to resolve conflict and promote problem solving in young children. The three questions that focus the study are: (a) How do Head Start teachers' conflict-related attitudes and knowledge change after a 40-hour training course on theory and practice to recognize and resolve personal conflict; (b) How do Head Start teachers' perceptions of their conflict resolution interventions with children change after a 40-hour training course on theory and practice to recognize and resolve personal conflict; and (c) Do 4-year-old Head Start children in classrooms with teachers who have been trained in conflict resolution show a greater reliance on prosocial methods to resolve conflicts compared to peers in classrooms where the teachers have not been trained in conflict resolution?

The PEACE project offers a model that may enhance social and emotional literacy in Head Start classrooms by training teachers in conflict resolution practices appropriate for 4-year-old children. Research studies targeting preschool children and/or teachers in measures of social and emotional skill development indicate that children benefit from training to promote interpersonal and problem solving skills (Quay & Jarrett, 1984; Saloner, 1988; Shure, 1990). Recent research on social emotional literacy that focuses on school-age children needs to be further tested on the preschool population.

The study, which is in process with Palm Beach County Head Start in Florida, is rooted in various theories of development and learning: sociocultural theory (Vygotsky, 1934/1978), social learning theory (Bandura, 1977), ecological theories of development (Brofenbrenner, 1979), and empowerment theory (Freire 1970/1997; Lederach 1997; Woolpert, Slayton, & Schwerin, 1998).

Six Head Start teachers are enrolled in a 13-week undergraduate level course in conflict resolution and peace education. There are pre and post interviews designed to measure teacher knowledge, attitudes, and behaviors related to the types of conflicts that commonly occur at Head Start settings. In addition to the in-depth interviews, teachers complete a self-assessment of their conflict styles (Thomas & Kilmann 1974) before the course. After teachers complete the course, children in classrooms of trained teachers (experimental group of 30 children) are tested for interpersonal problem solving ability using the Preschool Interpersonal Problem Solving (PIPS) test developed by Myrna Shure (1990). A control group of 30 children in classrooms of teachers who have not received training in conflict resolution will also receive the PIPS test. Qualitative analysis of content from teacher interviews will be done using NUDIST, and statistical analysis using SPSS will compare scores of experimental and control group children's problem solving ability.

Results are expected to be available by the end of 2000. In a 1999 pilot study with 14 teachers from Palm Beach County, posttests indicate that teachers show increased awareness of their own interpersonal approach to resolving conflict. While there were no child assessments done in the pilot study, teachers were observed after course completion and found to have introduced successful methods to promote problem solving and emotional development with children in their classrooms as a result of participation in the course.

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Cerebral Specialization for Language Comprehension in Bilingual Toddlers

Barbara T. Conboy, Debra L. Mills

An important issue in developmental psycholinguistics concerns the role of language experience in establishing specialized neural systems for language processing. In the present research, this question was addressed by examining the neural activity associated with word processing in 20-22-month-old children acquiring two languages simultaneously. Since bilingual children typically have different levels of experience with each language, it was hypothesized that different patterns of processing would be linked to each child's dominant versus nondominant language.

Event-related potentials (ERPs) were used to examine the timing, amplitude, and distribution of the neural activity linked to processing words children comprehended versus words they did not. Previous research using ERPs with monolingual toddlers indicated larger amplitudes of negative activity to known versus unknown words (Mills, Coffey-Corina, & Neville, 1993, 1997). Thus, increased negativity appears to index language processing related to word comprehension. Furthermore, ERP known-unknown word differences were more focally distributed in children with larger vocabularies (Mills et al., 1993, 1997). In the present study, ERP known-unknown word differences were compared across languages to determine whether a more focalized pattern was linked to vocabulary size. The sample consisted of 29 children who had regular exposure to English and Spanish beginning in the 1*st* year of life, and included children recruited from Head Start programs as well as the larger bilingual community. Each child was tested with an individualized word list developed using parent reports and a picture-pointing task. Language dominance was determined using 3-point parent rating scales and the number of words produced as reported on English and Spanish versions of the MacArthur Communicative Development Inventories (Fenson et al., 1993; Jackson-Maldonado, Thal, Marchman, Bates, & Guitierrez-Clellen, 1993). Mean amplitude measurements were submitted to mixed analysis of variance with language (dominant vs. nondominant), word type (known vs. unknown), hemisphere, and electrode site (frontal, anterior-temporal, temporal, and parietal) as within-subject variables. Between-subject comparisons examined the effects of overall vocabulary development on these patterns of neural activity. Following Pearson et al., (1994, 1995) "total conceptual vocabulary" (TCV) size was computed by summing the English and Spanish words produced and subtracting translation equivalents. A median split on this score was used to classify children as "lower" versus "higher" producers.

As predicted, results indicated language-specific ERP patterns. In the nondominant language, known-unknown word differences at 600-1200 milliseconds (msec) were broadly distributed across electrode sites over both hemispheres. In the dominant language, these differences were more focally distributed. Earlier differences (200-400 msec) were found only for words in the dominant language, at right frontal and anterior-temporal sites. Results also indicated that overall vocabulary size had an effect on the timing of these differences. The early (200-400 msec) differences were found only in the dominant language of the higher producers, but were not evident in the lower producers. The later differences were distributed differently in the higher versus lower producers. These results with bilingual toddlers underscore the role of experience in establishing the organization of language processing systems during the early stages of primary language acquisition.

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Frameworks of Education: Perspectives of Asian American Families and Head Start Staff

Deborah Hwa-Froelich, Carol E. Westby

Although America is becoming more culturally/linguistically diverse (CLD), the Asian/Pacific Islander (API) population is the fastest growing bilingual population in the United States (U.S. Census Bureau, 1997). Little knowledge exists, however, about appropriate assessments or interventions for API populations (Cheng, 1987). This presentation reports on Project FRAMES, a Head Start grant investigating the cultural frameworks of Head Start and Asian families it serves.

Frameworks are defined as past knowledge of events that shape interactional rules and meaning (Goffman, 1986). To provide culturally appropriate services to diverse families, practitioners must gather information about families' perspectives regarding child development, learning, and expectations of service providers. Assessing Asian children is as challenging as understanding their families' value and belief systems. When two participants with different cultural communication frameworks interact, misunderstanding and miscommunication may occur, resulting in poor relationships between professionals and families.

Much of the current information about the Asian culture is based on voluntary immigrants (Ogbu, 1992). Information about Southeast Asian refugees is limited to surface details that fail to describe underlying assumptions of their values and beliefs. Poverty, disruption of the family hierarchy, discrimination, and inconsistent application of the model minority stereotype further complicate Asian families' educational experience. Families may have children with learning problems who are viewed as model students, but are never referred for help (Lee, 1996; Pang & Cheng, 1998; Weinberg, 1997).

The Head Start program in this study advertises a multicultural perspective, but struggles to maintain Asian children's attendance and parent involvement. Because Asian children tend to be respectful, obedient, and are learning a second language, and because teachers lack the training to identify CLD children with learning problems, teachers overlook any learning problems the children may have.

A native interpreter and the principal investigator conducted three ethnographic interviews with nine Asian families and four Head Start staff. Interactions among staff-child, parent-child, and staff-parent were observed and recorded. Twelve Asian children's communication skills were observed and evaluated. All Head Start information given to parents (artifacts) was analyzed.

Data were interpreted in individualistic and collectivistic concepts, power relationships, and face issues (maintaining or saving face; Scollon & Scollon, 1995; Triandis, 1995). Parents identified differences between the two educational systems, but were often unsuccessful navigating the American educational system. The parents struggled to maintain their children's native values and beliefs at home, which were in conflict with the teachers' and peers' individualistic values and beliefs at school. Cultural differences of vertical-collectivism and horizontal-individualism were found across the areas of discipline, child development, attitudes, communication, learning, social relationships, and play.

The lack of cross-cultural understanding resulted in underreferral of Asian children; reduced Asian parent involvement; inappropriate service provision; misunderstanding; miscommunication; and conflict between parents, staff, and children. The staff expected individualism from the children, parents, and CLD staff. When parents or children did not respond individualistically, they were judged as less interested or needy of services.

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Success at Teaching an Unfamiliar Peer: Influences of Previous Mother-Child Interactions

Jason T. Hustedt

A recent Social Policy Report from the Society for Research in Child Development (Denner, Cooper, Lopez, & Dunbar, 1999) calls for an increase in university-community partnerships in which both researchers and community members can work together to reap the benefits of research investigations. The present research study is the result of one such partnership between the Head Start program in Tompkins County, New York, and researchers at Cornell University. This 2-year project investigates the social and cognitive development of 4-year-old Head Start children as they interact first (at Time 1) with their mothers and 1 month later (at Time 2) with a female adult who pretends to be unfamiliar with a series of toys and acts as a novice peer.

The primary focus of this study is tutors' use of "scaffolding," a process by which more-experienced individuals work with less-experienced individuals to reach a common goal that would have been difficult for the less-experienced individuals to reach independently (Wood, Bruner, & Ross, 1976). To date, the process of scaffolding among low-income families has been under researched, although a previous study demonstrated the benefits of effective scaffolding in low-income mothers and their 2-year-olds (Hustedt & Raver, in press). In this 1st year of the current study, 20 Head Start children and their mothers have participated. Experimental group children ($N = 12$) participated in scaffolding interactions with their mothers as they played with a series of toys and puzzles, while control group children ($N = 8$) played with the same toys when their mothers were present but otherwise occupied. Regardless of whether they had been assigned to the control group or the experimental group, all children were later asked to tutor the peer in the use of each of the toys and puzzles.

It was hypothesized that 4-year-olds who had previously engaged in mother-child scaffolding would be more successful in their assumption of the tutoring role than 4-year-olds who had not. In short, tutoring by an adult was expected to significantly improve children's performance of problem-solving tasks when they interacted with others. Therefore, this project will provide data that have specific applications to Head Start children's social interactions both inside and outside of the classroom. For example, parent presentations and handout materials about scaffolding have already been designed on the basis of preliminary data. Additional data will be gathered during the 2nd year of this project so that conclusions can be drawn using a sample of 55 children.

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Early Intervention for Child Conduct Problems in Head Start Families

Jane G. Querido, Sheila M. Eyberg

Conduct-disordered behavior in preschool-age children constitutes the single most important behavioral risk factor for later antisocial behavior. Research suggests that certain family characteristics put children at risk for developing conduct problems and that several of these factors are present at high levels in Head Start families. Since one of the cornerstones of Head Start is the proactive belief in early identification and intervention, it is necessary that effective services be provided to children who are deemed at risk for developing conduct problems.

Parent Child Interaction Therapy (PCIT; Eyberg & Boggs, 1998) is a brief, empirically supported treatment for conduct-disordered preschool children. However, PCIT has never been systematically studied for its effectiveness with Head Start families. The goal of this study was to screen for behavior problems in preschool children enrolled in Head Start and to examine the effectiveness of PCIT in a sample of Head Start families whose children were at risk for the development of later conduct problems. In addition, normative data on Head Start families will be gathered for the measures used in the treatment outcome study to provide a relevant source of reference in the examination of PCIT outcome in this population.

We hypothesized that, compared to families in the standard care group, in families in the standard care plus PCIT group, (a) children would exhibit significantly fewer behavior problems as rated by their parents, (b) children would be more compliant with their parents' commands during observed parent-child interactions, (c) parents would interact more positively and effectively with their children, and (d) parents would report lower levels of stress and depression, and higher levels of family support. We further hypothesized that, after treatment, all families who completed PCIT would maintain treatment gains at 6-month follow-up.

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Parenting Practices and Children's Social Competencies: Making Beneficial Connections for Urban Head Start Children

Christine McWayne

Identifying and cultivating competence and partnership are the principal objectives of Head Start's mission to enhance the development of young low-income children (Fantuzzo, Weiss, & Coolahan, 1998; U.S. DHHS, 1998). As part of an effort to achieve these mandates, Head Start programs are committed: (a) to identifying specific social competencies evidenced by children in the program and (b) to identifying high quality parenting practices that foster children's social competence. However, to date, the mandates have resulted in few theoretically based investigations that examine the relationships between culturally relevant parenting practices and children's social competencies from an ecological-developmental perspective. The present project intends to help address this need.

Previous and current efforts of the University of Pennsylvania/Head Start partners have attempted to redress the theoretical and methodological shortcomings of the parenting practice and social competency literature (e.g., lack of intra-group studies and exclusive utilization of univariate statistical techniques to look at multifaceted constructs; Abell, Clawson, Washington, Bost, & Vaughn, 1996; Garcia Coll, et al., 1996; Cicchetti & Lynch, 1993). Previous Head Start Research Scholars examined and developed measures of social competency and parenting practice that demonstrated reliability and validity with Philadelphia's Head Start families (Mendez, 1999; Coolahan, 1997, respectively). The present study extended prior partnership research by examining these two important constructs simultaneously using multivariate statistical techniques.

The target population for the present study consisted of 200 children (100 boys and 100 girls) drawn from 12 Head Start classrooms within the School District of Philadelphia. The Head Start program in this school district serves over 4,000 children and families in 164 classrooms. Of the children enrolled in Philadelphia Head Start centers, the majority is African American (83%). Of the remaining children, 8% are White, 6% are Latino, and 3% are Asian. The gender distribution includes 50% females and 50% males. The demographic composition of the program matches national proportions for urban Head Start programs, with income for 90% of the families below $12,000 and most families (64%) having incomes below $9,000 per year. Single parents comprise 85% of program enrollees.

The present poster displays the preliminary findings obtained during the 1st year of a Head Start Research Scholars grant project. Parenting practices, based on caregivers' self-report, were examined in relationship to children's social competencies evinced both at home and at school. Children's social competencies were measured utilizing teacher rating, parent rating, teacher observation, and independent assessment. Aspects of this construct included measures of children's verbal ability, peer play interaction, social engagement, emotional regulation, and temperament.

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Modification of Environmental Demands in the Classroom to Improve Coping Effectiveness and Social Skills in Preschool Children Attending Head Start

Margery Szczepanski

This Head Start Research Scholars study evaluated the effectiveness of a 12-week intervention program to improve coping effectiveness and social skills in preschool children attending Head Start. The intervention program was derived from the Coping Frame of Reference (Williamson & Szczepanski, 1999), a set of theoretically based practice guidelines for improving coping effectiveness in children. Effective coping was facilitated by creating a goodness of fit in the classroom between environmental demands and the children's ability to manage them. This was accomplished by grading and modifying physical, social, and activity demands so that they were congruent with the developmental capabilities of the children. The intervention program consisted of three components: (a) teacher training in modifying demands in the classroom to promote goodness of fit based on the Coping Frame of Reference (Williamson & Szczepanski) (b) teacher modifications of demands on a daily basis in the classroom, and (c) provision of weekly consultation sessions to teachers by an occupational therapist to collaborate in designing weekly classroom interventions to improve goodness of fit.

Two classrooms of children and their teachers from two Head Start sites participated in the intervention program. The intervention group included thirty-three 3- and 4-year-old predominantly Latino children. Twenty-five children from two additional classrooms participated in the control group. Pretest and posttest comparisons were made between the ratings on intervention and control group participants on the Coping Inventory (Zeitlin, 1985), a measure of coping effectiveness, and the Social Skills Rating System (Gresham & Elliot, 1990). Classroom environments were compared on the Early Childhood Environmental Rating Scale (Harms, Clifford, & Cryer, 1998) prior to and at the completion of the program. Process evaluation included identification of environmental modifications used in the classroom and their frequency of application by the teachers. Although the intervention group children demonstrated greater improvements in both coping and social skills in comparison to the control group, data analysis using repeated measures analysis of variance, did not reveal statistically significant differences in change between the groups. Both intervention classrooms demonstrated important changes in qualities of the classroom environment based on ratings of the Early Childhood Environmental Rating Scale (Harms, et al.) by an independent rater.

Preliminary findings suggest that qualitative change in the classroom environment can be made by modifying physical, social, and activity demands. Additional research is needed to examine the effectiveness of the complete set of guidelines from the Coping Frame of Reference (Williamson & Szczepanski, 1999) in improving preschool children's coping effectiveness and social skills. This poster presentation includes a brief summary of the Coping Frame of Reference (Williamson & Szczepanski) intervention guidelines applied in this study, a description of the intervention activities used by teachers to promote coping with demands in the classroom, and a summary of the data analysis.

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Assessment of Emergent Literacy in Head Start Preschool

Greta M. Massetti

The development of a teacher-administered dynamic assessment of Head Start children's emergent literacy skills was presented. The measure is a context-embedded assessment in which classroom teaching situations are constructed. These situations allow teachers to emphasize instruction in emergent literacy skills while assessing individual students' performance. The measure will be implemented in Head Start preschool classrooms, and its effectiveness in increasing emergent literacy skills will be tested.

(Abstract from program; poster summary not available for publication.)

Developing a Phonological Sensitivity Measure for Hispanic Head Start Children

Lisa M. Lopez

English and Spanish phonological sensitivity in Hispanic Head Start children was studied to determine this population's word knowledge in both languages. Results were used to help guide the development of phonological sensitivity measures in English and Spanish as well as to link to expressive and receptive vocabulary, determining the best language for these children's pre-literacy education.

(Abstract from program; poster summary not available for publication.)

A Study of the Home Literacy Practices of English as a Second Language in Head Start Families

Sharon Switzer

An overview of the research questions, a description of research methods used, and demographic trends of Brazilian and other Latin Americans in the United States are described. In addition, the amount and types of in-home literacy practices observed will be presented.

(Abstract from program; poster summary not available for publication.)

Lexical Development of Bilingual Children as a Function of Language Exposure, Acculturation, and Sociodemographic Risk

Judith R. Guerrero

Data from an ongoing study of 20 Mexican-American, low-income children ages 8 to 20 months living in an urban community in the United States is presented. Of primary interest are children's lexical growth trajectories in children's dominant language and children's lexicon in English and Spanish at 30 months.

(Abstract from program; poster summary not available for publication.)

The Prediction of Head Start Participation and Its Effect on the Outcomes of the Children of Adolescent Mothers

Jennifer E. Burke

Observations on whether Head Start attendance acts to moderate risk in the lives of the children of adolescent mothers were made. Maternal variables were used to predict later childhood cognitive, socio-emotional, and academic outcomes. Head Start attendance was then tested as a moderator of this relationship. Current analyses of the data are reported.

(Abstract from program; poster summary not available for publication.)

Practical Application of Screening and Functional Assessment for Emotional Behavioral Disorders in the Head Start Setting

Dana H. Abbott

Screening and functional assessment procedures in a Head Start program are examined. The project is divided into four phases. The first looks at the relationship between children identified through a developmental screen and children identified through a behavioral screen. In the second phase the attitudes of teachers toward functional assessment prior to training, following training, and after implementation are examined. The third phase studies outcomes for individual children who go through the process of functional assessment/functional analysis to eliminate inappropriate behaviors and encourage appropriate replacement behaviors. Finally, the referral/service provision for children identified as at-risk on the behavioral screen is reported.

(Abstract from program; poster summary not available for publication.)

Examining the Linguistic and Social Development of Latino Head Start Students

Sandra Barrueco

A collaborative project with a grantee to investigate the bilingual and social development of the Latino Head Start children predominately served is presented. Aims of the project include an examination of the influence of familial and program characteristics on such development. Preliminary data will be presented.

(Abstract from program; poster summary not available for publication.)

A Comparison of Functional Assessment Strategies with Head Start Children Displaying Challenging Behavior

Sandra Vargas Perez

The reliability and validity of the following functional assessment strategies: (a) interview, (b) direct observations, and (c) functional manipulations when used with young children in Head Start exhibiting challenging behavior are examined. In addition, the quality of behavior support plans designed using functional assessment strategies is discussed.

(Abstract from program; poster summary not available for publication.)

Plenary I

Neuroscience Perspectives on Brain Development Focusing on Language and Emotional Experience

CHAIR/DISCUSSANT: Kathryn Barnard
PRESENTERS: Patricia K. Kuhl, Allan N. Schore

- **Language and the Brain: A "Critical Period" for Learning**
  Patricia K. Kuhl
- **Parent-Infant Communication and the Neurobiology of Emotional Development**
  Allan N. Schore

Kathryn Barnard: I am pleased to be here to introduce this plenary session, Neuroscience Perspectives on Brain Development Focusing on Language and Emotional Experience. We have two outstanding speakers, Patricia Kuhl from the University of Washington, and Allan Schore from the University of California at Los Angeles.

Patricia Kuhl is not in the room, and instead will come to us through the magic of television. Patricia Kuhl is a professor at the University of Washington. She is a member of the American Academy of Arts and Sciences, a past president of the Acoustical Society of America, and a research affiliate of the neuroscience group at La Jolla, California. She has a profound interest in the study of language, speech, and particularly how speech is processed in the brain. In 1999 she coauthored the book, *The Scientist In The Crib: Minds, Brains and How Children Learn,* which has become a classic in the field.

The videotape you will see was created from a lecture Patricia gave as the nominated faculty lecturer of the year. I think it will give you the essence and power of her work in the speech and hearing sciences.

Patricia K. Kuhl: The baby. The baby is the best learning device ever created, and language learning is a workable example. The world over, infants like clockwork perform minor miracles when they coo at 3 months, when they babble at 7 months, when they produce first words at a year, two word utterances at 18 months, and by 3 years can talk your leg off. How do they do it?

Scientists have had something to say about this. A little over 40 years ago there was a historical confrontation between a very strong nativist and a very strong learning theorist on the topic of language. In 1957, American psychologist B. F. Skinner had published the book *Verbal Behavior,* in which he asserted that teaching language was like teaching a rat to press a bar. You bring it about by gradually shaping the behavior that you want, reinforcing it at every step.

Noam Chomsky wrote a scathing review of the book. He took a very different position. He emphasized the biological preparation for language. He argued that infants at birth had an innate and universal grammar, and an innate phonetics system of the sounds of language stored in their brains. He said you could virtually do away with the word, "learning," and replace it with a word more like "growth." He said language is like an organ; it is like the heart. It just grows according to its maturational program.

Forty years have passed since that historical confrontation and many new studies have led to a new view of language and learning. I will argue that early learning is not at all like the traditional learning described by Skinner. There is no explicit teaching of the information. In fact, we probably need a new word for learning. I like the word "mapping." Infants are mapping language, and I will try to explain what I mean by that. I will show that early language experience warps the brain's processing of sound, creating maps that arrange perception to be perfect for a single language. When this mapping occurs, no one ends up perceiving physical reality. All of us alter our perceptual systems to twist sound to make it easily perceived for our individual language. But it is not like the heart. That analogy is not correct. It will not just grow and develop if you give it food and water. So the new view is not well described by either of those two different historical alternatives.

Before we get to the details of the experiments and the theory, I want to recognize the people who have contributed to the explanation that I will develop. We will cover experiments conducted for over 23 years at the University of Washington. It takes an interdisciplinary team and an international effort to solve problems of this magnitude. Psychologists, linguists, neuroscientists and engineers have all collaborated on the problem. I am deeply indebted to all of these people for the contributions they have made to the discoveries that I will describe.

Let us now turn and have a look at speech. A sound spectrograph is a picture showing the frequencies in speech from low to high on the vertical axis with time on the horizontal axis. Formant frequencies are represented as dark bars on a sound spectrograph. Formant frequencies are created by resonances in the vocal tract and they change as you move your tongue and lips. They change quite quickly as you speak quickly. Your auditory system has to track these formant frequencies in order to hear the consonants and vowels that make up words. It is difficult to find where one sound or one word begins and ends because speech is so acoustically continuous. That is why when you hear a foreign speaker talk it sounds like they are talking so fast. The record is continuous. At least in handwriting the words are separated by spaces. That actually helps. But that is not the case in speech. It makes it difficult for a computer. Now, it is easier if you speak slowly and clearly, like, "Did you hit it to Tom?" Nobody talks like this, except possibly British nannies. We say "didja" instead of did you, and "hidita" instead of hit it to. So the computer has a lot of trouble unpacking the sounds and finding the words when the sounds and the words are all smeared together.

Let us look in more detail at two simple sounds, *e* and *ah*. Saying "e" and "ah" is very steady, it lasts a long time. The formant frequencies for *e* and *ah* are quite different. That makes it easy for you to imagine how your auditory system captures those differences. But when you get vowels that are close, like the vowels in the three words, cat, caught, and cot, computers cannot sort those sounds into different groups because the formant frequencies are all overlapping. All of us have different vocal tracts, sizes, and shapes. When we produce vowels that are very close, their form and frequencies are similar. For example, if two groups of people say "ah," some will actually say "ah," and others will say "aah." Those differences make it difficult for a computer because the computer notices each and every difference that we can hear. We hear the differences between the sounds, but we also hear clearly that they are *ah*s and *aah*s. We break them into two streams. It is easy for us to do that. But speech is a deeply encrypted code. Humans find it easy to unpack that signal and pay attention to the right features. Computers have not yet broken that code.

So how do babies do it? To answer that question I have established laboratories in four countries besides the United States. We wanted to study the results of nature's experiment. In each of these countries, infants are being raised listening to one particular language. Therefore, we try to study babies at birth to see how they begin, and then we study them at various points as they acquire a language. We have laboratories in Russia, Sweden, Japan, and Finland, because these languages are very different from English and we want to see what happens to babies as they listen to language and acquire the particular aspects of each individual language.

The biggest problem is how do you get infants to tell you what they know about the differences and similarities in speech? The technique we have used is called the head-turn technique. It was invented at the University of Washington in the 1970s by two people from the Department of Speech and Hearing Sciences; Wes Wilson and Gary Thompson. It works like a trick, and has been the workhorse of research in the developmental speech area.

Infants in this technique sit on the parent's lap, and they are watching a person holding a toy and moving it. The babies are focused on this toy to their right side. At the same time, there is a sound coming out of the loudspeaker located on the left. The baby is listening to the sound, and the sound may be something like a repeated *ee, ee, ee*. We want the baby to notice that the sound has changed from something like *ee* to *ah,* and then turn their heads away from the toys and look towards the loudspeaker where the sound has changed. They do that fairly naturally. When they do it, we reward them for it by turning on a black box. Inside the black box there is a toy animal. It is pounding a drum. There is a dog jumping up and down or there is a monkey clapping cymbals. It is the bee's knees for a 6-month-old. They learn very quickly. Control trials are run to make sure the babies are not just turning sporadically. The mother and the assistant are wearing headphones and listening to music so they cannot bias the infant to make it turn. By monitoring these head-turns, we can see what babies can hear. When they turn, they have heard that the tune has changed.

We have learned that at birth babies are very sophisticated listeners. They can hear all the distinctions of all languages no matter where the sounds come from: Urdu, Russian, Chinese, French. I like to say that infants are born citizens of the world. They do not know what language they are going to be born to listen to. They are ready for anything.

Now, in contrast, think about yourselves. As adults we can no longer do this. We have no universal capacity to hear the distinctions in many languages. We are culture-bound language specialists. We discriminate very many fewer sounds than babies do. Japanese adults and the English contrast between *r* and *l* is a great example. There are many examples, but this one is a classic. Japanese adults who have listened only to Japanese in their lives cannot distinguish American English *r* and *l,* like in rake and lake. The Japanese language does not uphold that distinction. It is not meaningful to change words. There is only Japanese *r*, no *l*. Americans listening to the Spanish *b* and *p* is the same. The Spanish distinction between *b* and *p* sounds to us both like American English *b*.

It is good that adults cannot hear these differences because they are not meaningful in their language. The question then is, how do we turn into culture-bound specialists? How do our citizen-of-the-world abilities leave us?

Our new studies in Japan and those of other investigators answer the "when" question. The answer is it happens very, very early. American and Japanese babies were tested on the American sound *ra* and *la* with the head-turn technique. What we learned is that at 6 to 7 months the infants in both countries discriminate the sounds *r* and *l* about 65%, well above 50% chance. They are doing just fine. However, just 3 months later, by 10 months, something dramatic has happened. The Japanese infants can no longer do it. They are behaving like adults in the culture. Their ability to discriminate *r* and *l* is at chance level.

The American babies improved in their discrimination of *r* and *l*. This is good for both groups. The Japanese babies are beginning to ignore a distinction that is not appropriate to their language, and the American babies are getting better since the distinction is important in English. We were very surprised that it came this early, well before children had reached the stage of first words. Therefore, by 10 months, we are no longer citizens of the world. We have moved from that universal state we were born in to the culture-bound state that we are currently in. What causes the transition?

The explanation we will develop focuses on how the brain organizes information about categories. Cognitive psychologists have suggested that categories are represented as prototypes or exceptionally good instances of categories. For example, a robin and an ostrich are both birds, and a collie and a terrier are both dogs. You will realize that in both cases one of them is a better instance of the category than the other. Let us say you were trying to teach a Martian who had never seen a bird or dog about birds and dogs. What would you describe? You would tend to describe the robin rather than the ostrich as a good case of a bird. If you were describing dogs you would describe the collie rather than the terrier. Robins and collies are better instances of their categories. They exhibit more of the critical properties that stand for that category. Psychologists have shown us that prototypes are special. You remember them longer, react to them faster, and you prefer them when compared to something that is a nonprototype from the category.

Therefore, in the 1980s, we started to take this approach with speech in my laboratory. Nobody had done these kinds of experiments with speech before. We started to ask whether you might have prototypes for speech sounds stored in your brain. The answer seemed to be yes. We tested adults of many, many languages with over a hundred vowels and we asked them to identify which of these sounds were heard as vowels in their language, and to identify the good ones. Then we had them identify which one of the sounds they would identify as vowels in the language.

It turns out that adults from different cultures hear very different vowels. Swedish listeners heard sixteen vowels and Americans heard about eight. Spanish listeners heard about five. Not only were there different numbers of vowels that people heard, but their favorite ones differed a lot. Even for a vowel like e that occurs in all these languages, the prototype was located in a different place for the speakers of different languages. The intriguing discovery was that these prototypes for individuals across languages, choosing the ones that they liked, had a special effect in perception. Our study showed that speech prototypes acted like perceptual magnets for other sounds in the category. They attract neighboring sounds, making them sound more similar to the prototype than they really are. It is as if the underlying space is warped, shrunk in the region of a prototype. The prototype seems to be an organizing principle. It is helpful for perception because it helps you ignore the minor variations like those that you heard when people were producing *ah* and *aah*. I call it the perceptual magnet effect because prototypes act like magnets, and nonprototypes do not behave in that way. Furthermore, we wanted to know, do young babies show the magnet effect for sounds, because it seems to be this organizing principle? Here is how we conducted the tests.

We had a prototype (P): the favorite *e* vowel for American speakers. We also had a nonprototype (NP) that is not a good version of it. We took the prototype and the nonprototype and created all the variants, rings of stimuli around the P and the NP. As you go away from the prototype or the nonprototype, physical distance is scaled. So the first ring around the P is just as far from the P in physical space as the first ring around the NP is from the NP. Now, the magnet effect predicts that you have to go further from the P in order to hear the sound change than you do when you go out from the NP. The magnet effect says prototypes gather the sounds around them. It takes a bigger difference before you can hear it, even though psychophysical distance is equated.

The infants were tested in the head-turn task in America. They were hearing either the prototype or the nonprototype as the background sound. It was repeated over and over again. Then at periodic intervals, we tested the babies with the stimuli around the P and the NP to see when they produced head-turn responses. When they produced head-turn responses they could hear a change. Let us see how the babies did. The babies in the prototype group, these 6-month-olds, heard all the sounds around the prototype just as though it was the prototype. They had to go out to the third or fourth ring of sounds before they could hear the sound change.

For the nonprototype group, these children heard a change as soon as you went past the first ring. So that was our magnet effect. The babies seemed to go further away from the prototype before they could hear the sound change than for the nonprototype. That is, babies were showing the magnet effect for a greater percent of the stimuli around the prototype than around the nonprototype. That was interesting. Babies at 6 months in America, listening to American sounds, already were showing this organizational effect, this magnetic effect around the prototype. So the question was how do babies know what the prototypes are? They are only 6 months old.

Noam Chomsky came to the University of Washington and we discussed this new result we had on the perceptual magnet effect in 6-month-old babies. He thought it was very interesting, and that it might be a sign of an innate phonetics at work. He made the prediction that if we went to other countries and tested babies on the American sounds, maybe all the babies would show this magnet effect for the vowels of English. And if we tested American babies with foreign sounds they would show magnet effects too.

The alternative I raised was that the babies were 6 months old. Maybe magnet effects develop as a function of listening to the language. Babies are bathed in language from the time they are born, and while speech is still meaningless to a 6-month-old, the input may be altering their brains and changing perception.

We both decided it was a great experiment to run, but the only way to do it was to test the babies in two countries, America and another country with the sounds from both languages. The question was where do we want to go? I sent students out saying we have to decide where we should run this experiment. I thought they would run to their linguistics textbooks to see what language is perfect for the experiment. Instead, they were checking the weather maps, and they were coming up with suggestions like Paris in the spring, Hawaii during the winter, summer in Spain. We went to Stockholm in January. It was 20 below zero and the only light was between 9:30 and 2:30 p.m. It was perfect for testing babies.

We tested 350 infants in about 12 weeks. The stimuli we used were the 32 variants of the American English e vowel prototype and the vowel *eu*. We do not hear *eu* in English. You make that sound by producing a tongue position for *e*, but then at the last minute changing your lips to pronounce *ooh*, and you get a rendition of *eu*. Now, I cannot produce a prototype Swedish vowel *eu*, but some members of the audience may be able do it. These were the sets of sounds that we used to test babies in America and babies in Sweden.

The results showed that the perceptual magnet effect depends on linguistic experience. American infants showed the effect only for the American vowel *e* and not for the Swedish vowel *eu*, and the Swedish infants did just the opposite. They showed the effect for *eu*, but not for *e*. Therefore, we showed that language experience, listening to language that surrounds you in your crib as a baby, will alter your perception by 6 months of age—earlier than anyone had ever imagined.

Our follow-up studies show another example of how the magnet effect results in an entire map of auditory space that is peculiar to one's language. In these studies we were creating synthetic stimuli, stimuli created by computer. This time we had a grid of 18 syllables. We used the prototypes *ra* and *la*, with their variants around them. We tested American and Japanese adults. We had them identify each of the sounds, tell us which ones were the best ones for the categories of their language, and then had them discriminate all possible pairs in the grid. Then we used a statistical method called multidimensional scaling (MDS) because you can take performance measures or reaction time and create a map with dots that reflects the distance between stimuli that people perceive. Therefore, if the dots are close together people do not discriminate those stimuli. If there is a large space between the dots that means that people can really hear the differences. MDS takes measures and creates a map that reflects how the person mentally scales the distances between the stimuli. Now, if perception mirrors physical reality, then the perceptual worlds of Americans and Japanese are very different. The interesting thing is that nobody perceives physical reality. Physically the stimuli were equally distant from one another, but perceptually the maps show this warping that has gone on. The perceptual map of an American adult shows magnet effects. The best instances of *ra* and *la* to an American ear are in distinct, discrete clusters. In the middle between the two clusters would be a big stretching of physical space. That is not real. Physical space is not that big, but that is how one perceives it. Space is stretched at the boundary, and shrunk at the center of the category. So a perfect map separates the two categories, minimizes within category differences, and stretches the difference between them.

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The Japanese map would show that the stimuli are all perceived as *r*. There are no magnet effects as there are for Americans, and no separation between the two categories. The two groups of people do not even pay attention to the same dimensions. American listeners attend to stimuli that pull the two categories apart; Japanese listeners attend to stimuli that stretch on that dimension.

Therefore, if you take only one message home, it is the idea that individuals have constructs that filter their perception of the world. The constructs differ in individuals and cultures. You can present two individuals with the same information, the same stimuli, and they will have totally different ways of perceiving them. This is an excellent example of the differences that exist in perception. They are not real, but it is the way perception works.

We believe that maps like this are being developed very early in a baby's life. We think that these maps account for the fact that the babies in Japan by 10 months no longer respond to the difference in *r* and *l*. Their maps have been created to pull these two sounds together. So magnet effects and the maps they result in alter perception, and that prepares babies for word acquisition. All of these processes are happening before words are acquired. So it is good that babies in Japan are not paying attention to the differences in their mother's speech in creating *r* and *l*-like sounds. Japanese adults do not use both *r*-like and *l*-like sounds. Their perceptual system collapses them. So it is good that babies go into word learning ignoring those differences between *r* and *l*; they are not meaningful in their language.

What are the implications of these findings? They have implications for us because we have to ask ourselves, what are they listening to? They are listening to us. The sounds of their native language are what is in the air and we are the ones putting them there. That highlights the importance of the speech parents and caretakers use with infants. We know that infants are bathed in language. What kind of language are babies hearing? If you have been reading the news magazines and watching TV you know that the speech addressed to infants is special. We used to call it motherese, but then fatherese when it was discovered that men did it too. Then, to be totally politically correct, it was called caretakerese, because even if you are not a parent you seem to do it.

Motherese has a higher pitch, a slower tempo, and exaggerated intonation contours. We record the pitch of the voices of mothers who come into the lab while they are talking to us and talking to their babies. When a mother talks to me, it is the regular drone that we use when we talk to one another. When she talks to her 2-month-old she says, "Can you say ah? Say ah. Hey you, say hi. Hi." I cannot even do it without a baby in front of me. It is not your job interview voice, but babies love it. If you give babies a choice of women talking to other adults, or those same women talking to babies, they will, hands-down, do anything they have to do to turn on the mother talking to her baby. Even if you filter out all the words and you just have the pitch, with the adult directed version of a hum for the infant directed version, babies will turn in whatever direction they have to turn to get the motherese signal.

We have recently learned that motherese is more than a cute signal that we use to attract the baby's attention. In a recent study we conducted in Russia, Sweden, and the United States, we found that mothers may be tutoring their babies on native language speech sounds. In this experiment we recorded mothers in all three countries as they are talking to their babies and to another adult, and we had them use words that contain *ah*, *e*, and *eu* in their speech, words like sheep, shop, shoe.

The results show that the form and frequencies of motherese are exaggerated in infant-directed speech. We exaggerate sounds when we speak to infants. We do not say, "I bought some beads" to a baby, we say I bought some **beads**. The vowels are three times as long and very exaggerated. They are cleaner. We clean up our language when we talk to children. We make better vowels, prototype vowels; ones that are probably optimal for learning.

Let us go back to our modeling and theorizing about babies. We have taken all these results and incorporated them into a model that I call the native language magnet model or NLM. The model has three phases in development that occur in the 1st year of life. The example will be on vowel perception, but the same thing happens with consonants. Phase one is when babies come into the world. No matter what culture they are born in they can hear all the distinctions between all vowels of all languages. They do not have to learn anything to be able to do this. They simply come that way. That is a very good thing. It would be more difficult if they had to learn to hear the appropriate differences. Six months later, phase two is in place and something else is there. If the baby is born in Sweden, for example, they already are developing magnet effects for the 16 vowels of Swedish. If born in Japan, they are forming the magnet effects the five vowels of Japanese. If American, they are forming magnet effects for the eight vowels of English.

By our estimates, at 6 months of age babies have heard hundreds of thousands of vowels. Their perceptual systems are organizing these vowels into categories. Therefore, there is more in place at phase two. The brain has already been altered by experience and the maps are beginning to form. In phase three, we look at the effects of that organization on the perception of foreign language sounds. Swedish babies can still discriminate all of the variations in vowels because the Swedish language contains almost every vowel used in the languages of the world. But Japanese babies hear fewer distinctions than they once heard because the brain has organized itself. Magnet effects are reconfiguring the space, remapping and reorganizing the space. So they no longer respond to all the distinctions that they once responded to. They are now focusing on the distinctions that are relevant to their own language. It is at this stage, in phase three, that Japanese babies no longer respond to the distinction between *r* and *l*, and American babies no longer respond to the Spanish *b* and *p*. Our abilities change. What looks like a loss is really a gain in knowledge about the sounds in the child's specific language. It helps communication become more rapid and efficient.

These kinds of maps might help us explain what makes second language learning so difficult as an adult. It is as though you have magnet effects in place and you take a second language and pull it through the sieve, or filters, created by the first language. These maps resist change. They are not indelible, but they resist change. If your map is Japanese, it might be difficult to listen to Swedish with all of its distinctions. You would not hear all those distinctions. If your map is Swedish, you might hear more distinctions when listening to Japanese than you should. That would also be difficult. The brain studies suggest that bilingual speakers have two distinct maps in place in the brain in two separate locations.

In the final minutes of this talk I want to switch topics and focus on the fact that speech is a multimodal event. You can see it as well as hear it. We know that the mental maps for speech are initially created from an auditory perspective, but we also see talkers. Studies are suggesting to us that the brain integrates information from the eye and the ear. That is why we do not like dubbed movies. The voices do not match the lips. It is difficult to process that information when there is a mismatch. I have created for you a little version of a dubbed baby. I actually made this for Bill Gates to convince him that I could trick his ears by showing him something that did not match what he was hearing, and send that signal to his eyes. What you are going to see on the videotaped experiment is that I am going to pronounce a nonsense syllable. The auditory signal being sent to your ears is the signal *baba*. But I have dubbed onto it a visual record that is appropriate for *gaga*. What you are going to perceive is neither one, not the auditory signal, not the visual signal, but something midway in between, something more like *dada* or *tha-tha*. I will have you close your eyes in the beginning and just listen to it, see what you hear. Then I'll have you open your eyes and see whether when you open your eyes the signal that you hear changes. If you behave like the subjects in my experiment, what you will hear with your eyes closed is the nonsense *baba*. But when you open your eyes you will hear that change to something more like *dada* or *tha-tha*. How many people showed the effect? Raise your hand if you showed the effect. Good, most of you did. If it did not work for you, see me later; there may be something wrong with your brain. This shows that the brain links information coming into your eye and information coming into your ear and blends the two. You do not hear either *baba* or *gaga*, but something midway between. You cannot turn this effect off no matter how you try. It is mandatory. As long as your eyes are open, your brain takes that information in and uses it.

So what about the infant brain? A number of years ago I teamed up with Andy Meltzoff who runs a major research program at the University of Washington on cognitive development. We wanted to pose the question to babies. Now, I have to tell you that after the experiment was published, Andy and I got married. So students, take note. Hanging out in laboratories is a good idea. Sometimes more than science goes on there.

Here is the experiment that we ran. Infants sit in a little infant theatre and they watch two faces, one mouthing *ah* and the other mouthing *e*. At the same time, a single sound, one that matches either *ah* or *e*, is played out of a loudspeaker right in the middle. There are no spatial clues to which face the voice matches because the sound is coming out of the middle. There are no temporal cues because the mouth movements are completely synched to the sound. So there is no sign of which face matches the voice. We trained a camera on the baby's eyes, and we watched what they looked at as we turned the sound on. The results show that 20-week-old babies will look longer at the face that matches the mouth movements that match the vowel they heard. So if you play them *ah* they will fixate on the face that is saying *ah*, and if you play them *e* they will fixate on the face saying *e*. By 20 weeks of age, babies link faces and voices.

We also found that during the experiment babies were talking back; turn-taking that we do when we talk to one another. By 12 weeks, babies know that you take turns in speech. They are watching the face, the face is going *ah, ah*, and pretty soon the babies start talking back. When they talk back at 12 weeks, they are kind of mixed up. They cannot really imitate something distinct for *ah, e*, and *oo*. But by 20 weeks, babies have begun to create a little mini-version of the vowel triangle. Now, lest you think that this is easy for the baby, understand that the baby's vocal tract is very tiny. It cannot get anywhere near producing the frequencies that we produce. Therefore they have to somehow translate this whole metric into a nonfrequency specific set of instructions. They can make little *ah*'s, *e*'s, and *oo*'s. It is not a simple problem, and yet by 20 weeks they are doing that.

The bottom line is that the brain is organizing itself, both in perception and in production. Before experience, perception is unorganized. After experience, perception seems to be much more organized, and in production the same thing occurs. Babies are imitating vowels. When they are 12 weeks old, they cannot quite understand what to do with this contraption, like ours, that they have to make sounds with. But by 20 weeks, after experience, you see a real vowel triangle appear. Very early in development, much earlier than we thought, the brain has organized both the perception of speech and the production of speech.

Here is what is going on in our lab right now. New techniques like functional magnetic resonance imaging and pet scans are lighting up the brains of adults, but one cannot use those techniques with infants and very young children. However, an old technology called, "event-related potentials" is working very well. We can watch brainwaves as a baby listens to sounds. In testing babies with foreign and native language sounds, we have been observing the brain correlates to the behavior results that I have given you. We can see, for example, that the left hemisphere is much more active than the right. Babies' brains are organizing language using their left brain, and they are doing that very early.

To summarize, we begin life with rich initial structure. We are not blank slates. We come in with a great deal of good foundation. In language we are endowed with the ability to separate the sounds of all languages. But then a very powerful learning mechanism takes over and abstracts rules about sounds and develops mental constructs—I call them maps for speech. The mental maps alter our perception. The magnet effects sculpt this innately provided system in a profound and permanent way. The three-phase model has implications for other realms of cognition. Notice that in this framework, biology and culture do not compete. It is not nature or nurture; they cooperate. I also talked a great deal about the effects of experience. Experience seems to warp the underlying acoustic space. It creates a perceptual world that differs substantially from the physical world. None of us perceive physical reality. The brain creates a map that constitutes a framework for listening to sound. This has implications for general perceptual theories.

I talked some about second language learning. Magnet effects act like filters on one's experience. These filters are not indelible, but they strongly effect perception and they resist change. When one learns a second language as an adult, the sounds of the second language have to be pulled through the filters set up by the first language. Maps structure one's experience, and that is helpful, but they interfere with new learning.

This may be a new way to look at the critical period. It is not that our biological clocks have halted learning, but that what we learn at one point influences what we can learn later. Speech production is similarly affected. That is why we speak second languages with an accent when we learn them past a certain age. Your vocal tracts have been trained to do a certain kind of thing, and they resist change when you try to learn a second language. If we can understand the nature of this interference, we might remain more open learners as we age. We are at the moment examining brain plasticity—what closes that window of learning—in studies in Japan.

The type of learning I described does not correspond to Skinner's conditioning and extrinsic reinforcement. It is unconscious, it is automatic, and it is relatively long lasting. It is probably species-specific. It may only occur in social interactions with other humans. It seems unlikely that infants' perception would be altered by playing Berlitz language tapes on the side of the crib. Bill Gates wanted to know if that would be possible. Can we alter infant perception? Can we leave the map open if we expose babies, even with tapes or computers, to formal language material? It probably will not work. We learn best from others of our species, just like songbirds, and hormones probably play a big role. I also demonstrated to you that speech is both auditory and visual. Even infants link auditory and visual speech. Infants not only learn how sounds sound, but they learn how they look on the face, and what they have to do with their vocal tracts to form sounds with their own mouths. Computers might be aided in speech recognition if they watch speech as well as listen to it.

In the model I described, grownups play a big role. Language is not like a heart that grows on its own. We, as adults, structure language ideally for infants. We seem to do this intuitively. Nobody taught us how to do it. We are prepared by evolution to do the right thing for the infants of the culture.

I close by examining how investigators in speech and language are utilizing the tools of modern neuroscience to further map how language is stored in the brain. It is going to be very exciting in the next decade to relate neuroscience, computer science, and the science of the developing mind. Understanding the infant mind will help us understand our role as parents, and in studying babies we may well uncover some deep truth about ourselves.

Barnard: The tape is available for purchase for $15 from the University of Washington. You can e-mail her about ordering it.

It is now my privilege and pleasure to introduce Dr. Allan Schore. Dr. Schore received his Ph.D. in clinical psychology. He has practiced as a clinician for many years and has faculty appointments at the University of California at Los Angeles in the Department of Psychiatry, at the Institute for Contemporary Psychoanalysis, and at the Southern California Psychoanalytic Institute. In addition to these affiliations, he is in private practice, on many editorial boards, and reviews for several professional journals and books.

Dr. Schore truly is a developmental neuroscientist with interests both in the short- and long-term effects of interpersonal relationships on early brain development and maturation, the structure and function capacities of the right brain, the theories of social/emotional development, the emotion of shame, attachment theory, application of interdisciplinary data to current modes of psychotherapy, and the effect of abuse and neglect on brain development. He has made an enormous difference in our understanding of the early development of the brain and affective regulation. I encourage you to read his book, *Affect Regulation and the Origin of the Self: The Neurobiology of Emotional Development.* This morning he will address that topic.

Allan N. Schore: At this point in time, although "the decade of the brain" has ended, it is clear that we are in the midst of a remarkable period in which dramatic new brain technologies continue to concentrate their focus upon certain basic problems of human psychology. And so, current brain imaging studies are giving us a more comprehensive picture of how the mature brain performs its essential function—detecting changes in both the environment and in the body, so that internal alterations can be made in order to adapt to different contexts. This research can do more than just detail the physical structure of the brain, it can delve directly into how changes in brain structural organization are associated with various normal and abnormal functional states, thereby linking biological and psychological models of the brain/mind/body.

It is undoubtedly true that by far the greatest amount of current research is on the adult rather then the developing brain, and most of it is not on normal but abnormal brain function. Even so, neuroscience is now becoming very interested in the early development of the brain. It is currently exploring "early beginnings for adult brain pathology" (Altman, 1997), and describing "alteration[s] in the functional organization of the human brain which can be correlated with the absence of early learning experiences" (Castro-Caldas et al., 1998). But this same time period of expansion of developmental neuroscience has also seen an explosion of interdisciplinary infant research, as developmental studies are now actively exploring not just the origins of cognitive, language, and sensory motor functions, but also the early development of social and emotional processes.

The question of why the early events of life have such an inordinate influence on literally everything that follows is one of the fundamental problems of science. How do early experiences, especially emotionally charged attachment experiences with other humans, induce and organize the patterns of structural growth that result in the expanding functional capacities of a developing individual? Using an arsenal of different methodologies and studying different levels of analysis, investigators are now inquiring into the fundamental mechanisms that underlie developmental processes. We now know that the concept of "early experiences" connotes much more than an immature individual being a passive recipient of environmental stimulation. Rather, these events represent active transactions between the infant and the early environment. The most important aspect of the environment is the social environment, the relationship the infant has with its caregivers.

In current thinking development is "transactional," and is represented as a continuing dialectic between the maturing organism and the changing environment. This dialectic is embedded in the infant-maternal relationship, and emotion (affect) is what is transacted in these interactions. This very efficient system of emotional exchanges is entirely nonverbal, and it continues throughout life as the intuitively felt affective communications that occur within intimate relationships. Human development cannot be understood apart from this affect-transacting relationship. Indeed, it now appears that the development of the capacity to experience, communicate, and regulate emotions may be the key event of human infancy.

Neuroscientists and developmental psychologists are now converging on the common principle that "the best description of development may come from a careful appreciation of the brain's own self-organizing operations" (Cicchetti & Tucker, 1994, p. 544). There is widespread agreement that the brain is a self-organizing system, but there is perhaps less of an appreciation of the fact that "the self-organization of the developing brain occurs in the context of a relationship with another self, another brain" (Schore, 1996, p. 60). This relationship is between the developing infant and the social environment, and is mediated by affective communications and psychobiological transactions.

Furthermore, these early socioemotional events are imprinted into the biological structures that are maturing during the brain growth spurt that occurs in the first 2 years of human life, and therefore have far-reaching and long enduring effects. The stupendous growth rate of brain structure in the 1st year of life is reflected in the increase of weight from 400g at birth to over 1000g at 12 months. The human brain growth spurt, which begins in the last trimester and is at least 5/6 postnatal, continues to about 18 to 24 months of age (Dobbing & Sands, 1973). Furthermore, interactive experiences directly impact genetic systems that program brain growth. DNA production in the cortex increases dramatically over the course of the 1st year (Schore, 1994). We now know that the genetic specification of neuronal structure is not sufficient for an optimally functional nervous system; the environment also powerfully affects the structure of the brain.

Thus, very current models hold that development represents an experiential shaping of genetic potential, and that genetically programmed "innate" stuctural systems require particular forms of environmental input. The traditional assumption was that the environment determines only the psychological residuals of development, such as memories and habits, while brain anatomy matures on its fixed ontogenetic calendar. Environmental experience is now recognized to be critical to the differentiation of brain tissue itself. Nature's potential can be realized only as it is enabled by nurture (Cicchetti & Tucker, 1994, p. 538).

Neurobiology has now established that the infant brain "is designed to be molded by the environment it encounters" (Thomas et al., 1997, p. 209). The brain is currently thought of as a "bioenvironmental" or "biosocial" organ (Gibson, 1996), and investigators are exploring the unique domains of the "social brain" (Brothers, 1990), and are speaking of "the social construction of the human brain" (Eisenberg, 1995). It is known that the accelerated growth of brain structure occurs during "critical periods" of infancy, is "experience-dependent," and is influenced by "social forces." Neuroscience is, however, unclear as to the nature of these "social forces." In fact, developmental psychology has much to say about the "social forces" that influence the organization of the baby's brain. The brain growth spurt exactly overlaps the period of attachment so intensely studied by contemporary researchers (Schore, 1998c, d, e; 1999d). It is now thought that "within limits, during normal development a biologically different brain may be formed given the mutual influence of maturation of the infant's nervous system and the mothering repertory of the caregiver"(Connolly & Prechtl, 1981, p. 212).

My work integrates developmental psychology and infant psychiatry with neuroscience in order to formulate models of normal and abnormal emotional development. I have written, "The beginnings of living systems set the stage for every aspect of an organism's internal and external functioning throughout the lifespan" (Schore, 1994, p. 3). The central thesis of my ongoing work is that the early social environment, mediated by the primary caregiver, directly influences the final wiring of the circuits in the infant's brain that are responsible for the future socioemotional development of the individual. The "experience" that is required for the "experience-dependent" growth of the brain in the first 2 years of human life is specifically the social-emotional experiences embedded in the attachment relationship between the infant and the mother. Attachment is thus the outcome of the child's genetically encoded biological (temperamental) predisposition *and* the particular caregiver environment.

Since writing the book, I have expanded this psychoneurobiological model and continue to cite a growing body of interdisciplinary studies which suggests that these interpersonal affective experiences have a critical effect on, specifically, the early organization of the limbic system (Schore, 1994, 1996, 1997a, 1998a, 1999a, in press d, e), the brain areas specialized for not only the processing of emotion but for the organization of new learning and the capacity to adapt to a rapidly changing environment (Mesulam, 1998). The emotion processing limbic system is expanded in the right brain (Tucker, 1992; Joseph, 1996), or what the neuroscientist Ornstein (1997) calls "the right mind." Most importantly, this right hemisphere, the neurobiological substrate of the emotional brain, is in a growth spurt in the first 1½ years, and dominant for the first 3 years of human life (Chiron et.al., 1997). Hemispheric brain growth cycles continue asymmetrically throughout childhood, showing early growth spurt of the right hemisphere.

According to attachment theory, the dominant theory of emotional development in international developmental psychology, the limbic system is the site of developmental changes associated with the rise of attachment behaviors (Schore, 2000). But this theory also proposes that the mother directly influences the maturation of the infant's emerging coping capacities. In a number of writings I offer evidence that attachment experiences specifically influence the experience-dependent maturation of the infant's right hemisphere (Schore, 1994, 1997a, in press a, b, c, d, e). The right brain acts as "a unique response system preparing the organism to deal efficiently with external challenges," and so its adaptive functions mediate the stress coping mechanisms (Wittling, 1997, p. 55). This psychoneurobiological conception thus highlights the critical role of attachment experiences in the development of life-long coping capacities. The finding that the right hemisphere is dominant in human infants, and indeed, for the first 3 years of life, thus has significant implications for Head Start, and particularly Early Head Start.

I will present an overview of recent psychological studies of the social-emotional development of infants and neurobiological research on the maturation of the early developing right brain. I want to focus on the structure-function relationships of an event in early infancy that is central to human emotional development: the organization, in the 1st year, of an attachment bond of interactively regulated affective communication between the primary caregiver and the infant. These experiences culminate, at the end of the 2nd year, in the maturation of a regulatory system in the right hemisphere. The failure of the dyad to create this system in the first 2 years is a developmental risk factor. These models are offered as heuristic proposals that can be evaluated by experimental and clinical research.

Attachment Processes and Emotional Communications

As soon as the child is born it uses its maturing sensory capacities, especially smell, taste, and touch, to interact with the social environment. But by the end of the 2nd month, with the myelination of occipital areas involved in the visual perception of a human face, there is a dramatic progression of its social and emotional capacities. In particular, the mother's emotionally expressive face is, by far, the most potent visual stimulus in the infant's environment, and the child's intense interest in her face, especially in her eyes, leads him to track it in space, and to engage in periods of intense mutual gaze. The infant's gaze, in turn, evokes the mother's gaze, thereby acting as a potent interpersonal channel for the transmission of "reciprocal mutual influences." It has been observed that the pupil of the eye acts as a nonverbal communication device and that large pupils in the infant release caregiver behavior (Hess, 1975).

Face-to-face interactions begin at about 2 months, in the first context of social play, and they are patterned by an infant-leads-mother-follows sequence. These are "highly arousing, affect-laden, short interpersonal events that expose infants to high levels of cognitive and social information. To regulate the high positive arousal, mothers and infants...synchronize the intensity of their affective behavior within lags of split seconds" (Feldman, Greenbaum, & Yirmiya, 1999, p. 223). Feldman et al. observe that such experiences afford infants "their first opportunity to practice interpersonal coordination of biological rhythms, to experience the mutual regulation of positive arousal, and to build the lead-lag structure of adult communication" (p. 223).

A frame-by-frame analysis shows that this moment-to-moment state sharing represents an organized dialogue occurring within milliseconds (see Figure 1). In contexts of "mutually attuned selective cueing," the infant learns to send specific social cues to which the mother has responded, thereby reflecting "an anticipatory sense of response of the other to the self, concomitant with an accommodation of the self to the other" (Bergman, 1999, p. 96). Thus the best description of this exchange is "affect synchrony." According to Lester, Hoffman, and Brazelton, "synchrony develops as a consequence of each partner's learning the rhythmic structure of the other and modifying his or her behavior to fit that structure" (1985, p. 24).

Figure 1 shows photographs of a "mirroring" sequence. Mother and infant are seated face-to-face, looking at each other. At point A, mother shows a "kiss-face," and infant's lips are partially drawn in, resulting in a tight, sober-faced expression. At point B, mother's mouth has widened into a slightly positive expression, and infant's face has relaxed with a hint of widening in the mouth, also a slightly positive expression. At point C, both mother and infant show a slight smile, further widened at point D. At point E, the infant breaks into a "full gape smile." At point F, the infant has shifted the orientation of his head further to his left, and upward, which heightens the evocativeness of the gape-smile. The total time is under 3 seconds (Beebe & Lachmann, 1988).

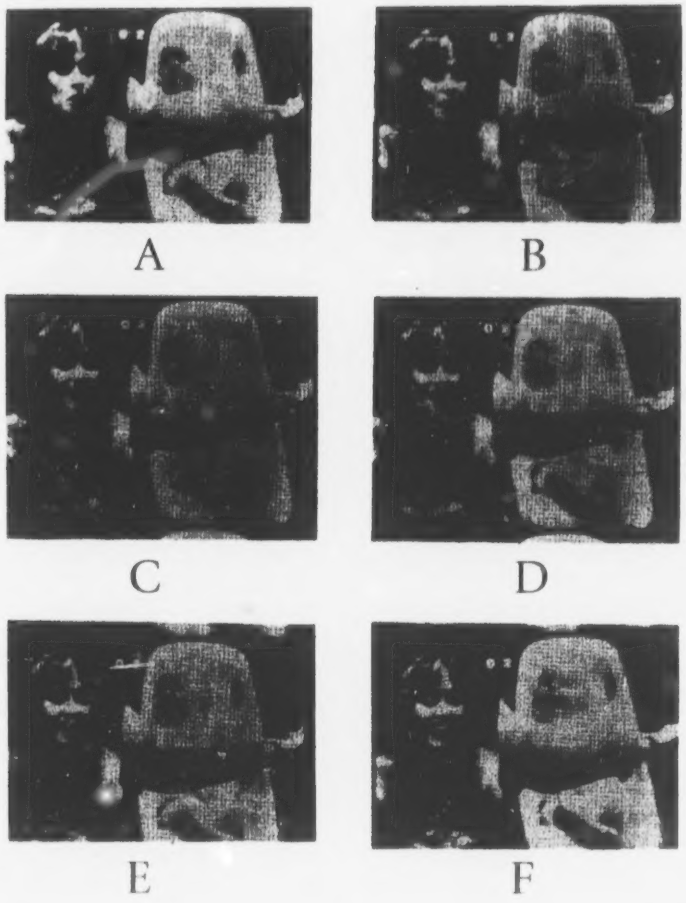

Figure 1. Frame-by-Frame Analysis of Mother-Child "Mirroring" Sequence.

This microregulation continues, as soon after the "heightened affective moment" of an intensely joyful full gape smile, the infant will gaze avert in order to regulate the potentially disorganizing effect of this intensifying emotion (see Figure 2). In order to maintain the positive emotion, the attuned mother takes her cue and backs off to reduce her stimulation. She then waits for the infant's signals for reengagement. In this way, not only the tempo of their engagement, but also their disengagement and reengagement, is coordinated. In this process of "contingent responsivity," the more the mother tunes her activity level to the infant during periods of social engagement, the more she allows him to recover quietly in periods of disengagement, and the more she attends to the child's reinitiating cues for reengagement, the more synchronized their interaction. The psychobiologically attuned caregiver thus facilitates the infant's information processing by adjusting the mode, amount, variability, and timing of the onset and offset of stimulation to the infant's actual integrative capacities. These mutually attuned synchronized interactions are fundamental to the healthy affective development of the infant.

Figure 2 shows a sequence of an attuned interaction: At point A, the infant looks at the mother and the mother shows an exaggerated facial expression. At point B, the infant and the mother smile. At point C, the infant laughs, and the mother relaxes her smile. At point D, the infant looks away, and the mother ceases her smile and watches her infant (Field & Fogel, 1982).

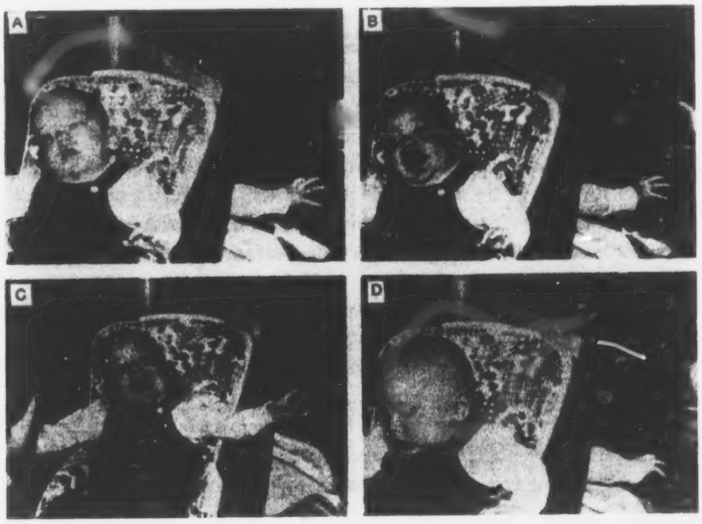

Figure 2. Sequence of an Attuned Interaction

Furthermore, in the visual and auditory emotional communications embedded within synchronized face-to-face transactions, both members of the dyad experience a state transition as they move together from low arousal to a heightened energetic state of high arousal, a shift from quiet alertness into an intensely positive affective state. In physics, a property of resonance is sympathetic vibration, which is the tendency of one resonance system to enlarge and augment through matching the resonance frequency pattern of another resonance system. It is well established that the transfer of emotional information is intensified in resonant contexts, and that, at the moment when a system is tuned at the "resonant" frequency, it becomes synchronized. Such energy-infused moments allow for a sense of vitalization, and thereby increased complexity and coherence of organization within the infant (Schore, 1997a, in press a).

Resonances often have chaos associated with them, and thus they are characterized by nonlinear dynamic factors: relatively small input amplitudes engender a response with a surprisingly large output amplitude. This amplification occurs especially when external sensory stimulation frequency coincides with the organism's own endogenous rhythms. The British pediatrician-psychoanalyst Winnicott (1971) describes the infant's expression of a "spontaneous gesture," a somato-psychic expression of the burgeoning "true self," and the attuned mother's "giving back to the baby the baby's own self."

In other words, when a psychobiologically attuned dyad co-creates a resonant context within an attachment transaction, the behavioral manifestation of each partner's internal state is monitored by the other, and this results in the coupling between the output of one partner's loop and the input of the other's to form a larger feedback configuration and an amplification of the positive state in both. Infant researchers refer to the delight the infant displays in reaction to the augmenting effects of his mother's playful, empathically attuned behavior, her mulitmodal sensory amplification and resonance with the child's feelings. Stern (1985) describes a particular maternal social behavior that can "blast the infant into the next orbit of positive excitation," and generate "vitality affects." In these transactions the dyad is co-creating "mutual regulatory systems of arousal."

In this system of nonverbal emotional communication, the infant and mother co-create a context that allows for the outward expression of internal affective states in infants. In order to enter into this communication, the mother must be psychobiologically attuned not so much to the child's overt behavior as to the dynamic crescendos and decrescendos of his internal states of arousal. She also must monitor her own internal signals and differentiate her own affective state, as well as modulating nonoptimal high levels of stimulation which would induce supra-heightened levels of arousal in the infant. The burgeoning capacity of the infant to experience increasing levels of accelerating, rewarding affects is thus, at this stage, amplified and externally regulated by the psychobiologically attuned mother, and depends upon her capacity to engage in an interactive emotion communicating mechanism that generates these in herself and her child.

But the primary caregiver is not always attuned. Developmental research shows frequent moments of misattunement in the dyad, or ruptures of the attachment bond. Although short-term dysregulations are not problematic, prolonged negative states are toxic for infants, and although they possess some capacity to modulate low intensity negative affect states, these states continue to escalate in intensity, frequency, and duration. In early development an adult provides much of the necessary modulation of infant states, especially after a state disruption and across a transition between states, and this allows for the development of self-regulation.

Studies of interactive attunement following dyadic misattunement, of "interactive repair," support a conception of the mother's "holding" or "containing" function as the capacity to "stay with" the child through its emotional/impulsive expressions, "to hold the situation in time." In this pattern of "disruption and repair" (Beebe & Lachmann, 1994), the "good enough" caregiver who induces a stress response in her infant through a misattunement reinvokes a reattunment in a timely fashion, a regulation of the infant's negative state. If attachment is interactive synchrony, stress is defined as an *asynchrony* in an interactional sequence, and, following this, a period of re-established *synchrony* allows for stress recovery. The mother and infant thus dyadically negotiate a stressful state transition. Infant resilience emerges from the child and parent transitioning from positive to negative, and back to positive affect. Again, the key is the caregiver's capacity to monitor and regulate her own arousal levels.

These arousal-regulating transactions, which continue throughout the 1st year, underlie the formation of an attachment bond between the infant and primary caregiver. An essential attachment function is "to promote the synchrony or regulation of biological and behavioral systems on an organismic level" (Reite & Capitanio, 1985, p. 235). Indeed, psychobiological attunement, interactive resonance, and the mutual synchronization and entrainment of physiological rhythms are fundamental processes that mediates attachment bond formation, and attachment can be defined as the interactive regulation of biological synchronicity between organisms (Schore, 1994, 2000a, b, in press c, d).

To put this another way, in forming an attachment bond of somatically expressed emotional communications, the mother is synchronizing and resonating with the rhythms of the infant's dynamic internal states and then regulating the arousal level of these negative and positive states. Attachment is thus the dyadic (interactive) regulation of emotion (Sroufe, 1996). The infant becomes attached to the psychobiologically attuned, regulating, primary caregiver who not only minimizes negative affect, but also maximizes opportunities for positive affect.

These data underscore an essential principle overlooked by many emotion theorists, that affect regulation is not just the reduction of affective intensity, or the dampening of negative emotion. It also involves an amplification, an intensification of positive emotion, a condition necessary for more complex self-organization. Attachment is not just the reestablishment of security after a dysregulating experience and a stressful negative state, it is also the interactive amplification of positive affects, as in play states. Regulated affective interactions with a familiar, predictable primary caregiver create not only a sense of safety, but also a positively charged curiosity that fuels the burgeoning self's exploration of novel socioemotional and physical environments.

The Neurobiology and Psychobiology of Attachment

According to Ainsworth, attachment is more than overt behavior, it is "built into the nervous system, in the course and as a result of the infant's experience of his transactions with the mother" (1967, p. 429). This brings us to another level of analysis, the neurobiological level. In this "transfer of affect between mother and infant," how are developing brain systems influenced by these interactions with the social environment?

Trevarthen's (1990) work on maternal-infant protoconversations bears directly on this problem. Coordinated with eye-to-eye messages are auditory vocalizations (tone of voice, Motherese) as a channel of communication, and tactile and body gestures. A traffic of visual and prosodic auditory signals induce instant emotional effects, namely the positive affects of excitement and pleasure built within the dyad. But Trevarthen also focuses on internal structure-function events, stating that, "the intrinsic regulators of human brain growth in a child are specifically adapted to be coupled, by emotional communication, to the regulators of adult brains" (p. 357). Face-to-face communication between a mother and her infant is called protoconversation. Protoconversation is mediated by eye-to-eye orientations, vocalizations, hand gestures, and movements of the arms and head, all acting in coordination to express interpersonal awareness and emotions.

According to Trevarthen (1993), the resonance of the dyad ultimately permits the intercoordination of positive affective brain states. His work underscores the fundamental principle that the infant's brain is not only affected by these transactions, but it's growth literally requires brain-to-brain interaction and occurs in the context of an intimate positive affective relationship between mother and infant. This interactive mechanism requires older brains to engage with mental states of awareness, emotion, and interest in younger brains, and involves a coordination between the motivations of the infant and the subjective feelings of adults. These findings support Emde's idea that, "It is the emotional availability of the caregiver in intimacy which seems to be the most central growth-promoting feature of the early rearing experience" (1988, p. 32).

There is a consensus that interactions with the environment during critical periods are necessary for the brain as a whole to mature, but we also know that different regions of the brain mature at different times. Can we tell what specific parts of the growing brain are affected by these emotion-transacting events? It is now thought that "the emotional experience of the infant develops through the sounds, images, and pictures that constitute much of an infant's early learning experience, and are disproportionately stored or processed in the right hemisphere during the formative stages of brain ontogeny" (Semrud-Clikeman & Hynd, 1990, p. 198). With regard to the unique nature of this memory store, it has been pointed out that, "the infant relies primarily on its procedural memory systems" during "the first 2-3 years of life" (Kandel, 1999, p. 513). Recall the right hemisphere is dominant for the first 3 years.

These emotionally charged, psychobiologically attuned face-to-face interactions occur in the context of mother-infant play, and they increase over the 2nd and 3rd quarters of the 1st year. The learning mechanism of attachment, imprinting, is defined as *synchrony* between sequential infant-maternal stimuli and behavior (Petrovich & Gewirtz, 1985). I suggest that in these interactive regulatory transactions, the infant's right hemisphere, which is dominant for the infant's recognition of the maternal face and for the perception of arousal-inducing maternal facial affective expressions, visual emotional information, and the prosody of the mother's voice, is synchronizing with and thereby regulated by the output of the mother's right hemisphere, which is dominant for nonverbal communication, the processing of emotional information, the expression of spontaneous gestures, and the maternal capacity to comfort the infant.

In these transactions, the attuned caregiver is "downloading programs" into the infant's brain by an optimal "chunking" of bits of socioaffective stimulation that the child's developing right hemispheric socioaffective information processing system can efficiently process and store in memory. In particular, as a result of attachment experiences, the infant develops a representation of the mother, especially her face. We now know that the infant's memory representation includes not only details of the learning cues of events in the external environment (especially those that form a face), but also of reactions in his internal arousal state to changes in the external environment. These attachment experiences are imprinted into the early imagistic, visceral, and nonverbal implicit-procedural memory system of the right brain (Henry, 1993; Schore, 1994, 2000b; Siegel, 1999).

Furthermore, Tronick and his colleagues (1998) are now describing how microregulatory social-emotional processes of communication generate expanded intersubjective states of consciousness in the infant-mother dyad. In such, there is "a mutual mapping of (some of) the elements of each interactant's state of consciousness into each of their brains" (Tronick & Weinberg, 1997, p. 75). He argues that the infant's self-organizing system, when coupled with the mother's, allows for a brain organization that can be expanded into more coherent and complex states of consciousness. I suggest that Tronick is describing an expansion of what the neuroscientist Edelman (1989) calls primary consciousness, which relates visceral and emotional information pertaining to the biological self, to stored information processing pertaining to outside reality. Edelman lateralizes primary consciousness to the right brain.

In light of research showing the involvement of the right hemisphere in attentional processes (e.g., Sturm et al., 1999), interactive experiences of "joint attention" may act as a growth-facilitating environment for the experience-dependent maturation of right hemispheric attentional capacities (Schore, 2000a, in press d, e). Notice that during the heightened affective moment the child's attention is riveted on the mother's face, but this hemisphere is also concerned with the analysis of direct information received from the body. Thus, in attachment transactions the child is using the output of the mother's right cortex as a template for the imprinting, the hard wiring of circuits in his own right cortex that will come to mediate his expanding cognitive-affective capacities to adaptively attend to, appraise, and regulate variations in both external and internal information. In support of this, Ryan (1997) and his colleagues using EEG and neuroimaging data, now report that, "the positive emotional exchange resulting from autonomy-supportive parenting involves participation of right hemispheric cortical and subcortical systems that participate in global, tonic emotional modulation" (p.719).

It is important to note that these dyadically synchronized, affectively charged transactions elicit high levels of metabolic energy for the tuning of developing right brain circuits involved in processing socioemotional information. A recent article in *Science* suggests that, "mothers invest extra energy in their young to promote larger brains" (Gibbons, 1998, p. 1346). In terms of self-organization theory, the mutual entrainment of their right brains during moments of affect synchrony triggers an amplified energy flow, allowing for a coherence of organization that sustains more complex states within both the infant's and the mother's right brains. In fact, evidence now indicates that the organization of the mother's brain is also being influenced by these relational transactions. A study of early mammalian mother-infant interactions (Kinsley et al., 1999), published in *Nature*, entitled "Motherhood improves learning and memory," reports increased dendritic growth in the mother's brain.

Interactive transactions, in addition to producing neurobiological consequences, are also generating important events in the infant's bodily state, that is, at the psychobiological level. Winnicott (1986, p. 258) proposed that, "The main thing is a communication between the baby and mother in terms of the anatomy and physiology of live bodies." Developmental psychobiological research reveals that when the dyad is in the mutually regulating "symbiotic" state, the adult's and infant's individual homeostatic systems are linked together in a superordinate organization which allows for mutual regulation of vital endocrine, autonomic, and central nervous systems of both mother and infant by elements of their interaction with each other. Psychobiologists are emphasizing the importance of "hidden" regulatory processes by which the caregiver's more mature and differentiated nervous system regulates the infant's "open," immature, internal homeostatic systems (Hofer, 1990).

These body-to-body communications also involve right brain to right brain interactions. Indeed, as you see here most human females cradle their infants on the left side of the body (controlled by the right hemisphere). This tendency is well developed in women but not in men, is independent of handedness, and is widespread in all cultures (Manning et al., 1997). It has been suggested that this left-cradling tendency "facilitates the flow of affective information from the infant via the left ear and eye to the center for emotional decoding, that is, the right hemisphere of the mother" (p. 327). As the neurologist Damasio (1994) indicates, this hemisphere contains the most comprehensive and integrated map of the body state available to the brain. Lieberman (1996) has written that current models of development are almost exclusively focusing on cognition. In an article in the *Infant Mental Health Journal* she states, "The baby's body, with its pleasures and struggles, has been largely missing from this picture" (p. 289).

Even more specifically, psychobiological studies of attachment, the interactive regulation of biological synchronicity between organisms, indicate that the intimate contact between the mother and her infant is regulated by the reciprocal activation of their opiate systems. Elevated levels of opiates (beta endorphins) increase pleasure in both (Kalin, Shelton, & Lynn, 1995). In these mutual gaze transactions, the mother's face is inducing the production of not only endogenous opiates, but also regulated levels of dopamine in the infant's brain, which generates high levels of arousal and elation. The expanding attachment mechanism thus sustains increased regulated, synchronized, positive arousal in play episodes. In these episodes, the mother, in a state of excitement, is also stimulating regulated levels of corticotropin releasing factor in the infant brain, which in turn increases ACTH and noradrenaline and adrenaline activity in the child's sympathetic nervous system (Schore, 1994, 1996, in press d).

And in her soothing and calming functions, the mother is also regulating the child's oxytocin levels. It has been suggested that oxytocin, a vagally-controlled hormone with antistress effects, is released by "sensory stimuli such as tone of voice and facial expression conveying warmth and familiarity" (Uvnas-Molberg, 1997, p. 42). In regulating the infant's vagal tone and cortisol level, activities regulated by the right brain, she is also influencing the ongoing development of the infant's postnatally maturing parasympathetic nervous system. The sympathetic and parasympathetic components of the ANS, important elements of the affect transacting attachment mechanism, are centrally involved in the child's developing coping capacities.

Organization of a Regulatory System in the Right Brain

Attachment is "the apex of dyadic emotional regulation, a culmination of all development in the 1st year and a harbinger of the self-regulation that is to come" (Sroufe, 1996, p. 172). A psychoneurobiological perspective suggests that the infant's emerging social, psychological, and biological capacities can not be understood apart from its relationship with the mother. This is due to the fact that the maturation of the infant's right brain is experience-dependent, and that this experience is embedded in the affect regulating transactions between the mother's right brain and the infant's right brain. This hemisphere contains the major regulatory systems of the brain (Schore, 1994, 1997a, 2000b, in press d).

What are the unique functional capacities of this "nondominant" nonverbal right hemisphere? Right cortical areas contain a "nonverbal affect lexicon," a vocabulary for nonverbal affective signals such as facial expressions, prosody (the emotional tone of the voice), and gestures (Bowers et al., 1993). Very recent neuroimaging studies show that the right hemisphere is faster than the left in performing valence-dependent, automatic, pre-attentive appraisals of emotional facial expressions (Pizzagalli, Regard, & Lehmann, 1999). But in addition, the representation of visceral and somatic states and body sense is under primary control of the "non-dominant" hemisphere (Schore, 1998a).

Indeed, the right cortical hemisphere, more so than the left, contains extensive reciprocal connections with limbic and subcortical regions, and therefore is dominant for the processing and expression of emotional information (Schore, 1994). Authors are now referring to a "rostral limbic system," a hierarchical sequence of interconnected limbic areas in the orbitofrontal cortex, insular cortex, anterior cingulate, and amygdala (Devinsky, Morrell, & Vogt, 1995), and an "anterior limbic prefrontal network" interconnecting the orbital and medial prefrontal cortex with the temporal pole, cingulate, and amygdala (Carmichael & Price, 1995). These right limbic circuits allow for cortically processed information concerning the external environment (such as visual and auditory stimuli emanating from the emotional face of an attachment object) to be integrated with subcortically processed information regarding the internal visceral environment (such as concurrent changes in the bodily self state). This relaying of sensory information into the limbic system allows incoming social information to be associated with motivational and emotional states.

A growing body of work now reveals that the right hemisphere is also more deeply connected into the ANS, and that "right hemisphere control exists over both parasympathetic and sympathetic responses," the somatic components of all emotional states (Spence et al., 1996). There is data to show that the hypothalamus, the head ganglion of the ANS, is right-lateralized (Kalogeras et al., 1996). The hypothalamic nuclei are considerably larger on the right side of the human brain (Sowell & Jernigan, 1998), and the right hemisphere is dominant for the production of corticotropin releasing factor, and for cortisol (Wittling & Pfluger, 1990), the neurohormones that mediate coping responses. For the rest of the lifespan, the right brain plays a superior role in the regulation of physiological and endocrinological functions, whose primary control centers are located in subcortical regions of the brain. The connections between the higher centers of this hemisphere and the hypothalamus are forged in infancy.

Since the hypothalamo-pituitary-adrenocortical axis and the sympathetic-adrenomedullary axis that mediate the brain's coping mechanisms are both under the control of the right cerebral cortex, the adaptive functions of this hemisphere mediate the human stress response (Wittling, 1997). It is therefore centrally involved in the vital functions that support survival and enable the organism to cope actively and passively with stress (Wittling & Schweiger, 1993). The attachment relationship thus directly shapes the maturation of the infant's right brain stress-coping systems that act at levels beneath awareness.

The right hemisphere contains an affective-configurational representational system, one that encodes self-and-object images unique from the lexical-semantic mode of the left. I suggest that it stores an internal working model of the attachment relationship that determines the individual's characteristic approach to affect regulation. In the securely attached individual, this representation encodes an expectation that homeostatic disruptions will be set right, allowing the child to self-regulate functions that previously required the caregiver's external regulation. For the rest of the lifespan these unconscious internal working models are used as guides for future action.

In a recent issue of the *American Psychologist,* Bargh and Chartrand (1999) asserted,

> Most of moment-to-moment psychological life must occur through nonconscious means if it is to occur at all...various nonconscious mental systems perform the lion's share of the self-regulatory burden, beneficiently keeping the individual grounded in his or her current environment (p. 462).

These regulatory systems are not innate, but a product of the attachment experience—dependent on the maturation of the right brain. Since the right hemisphere is centrally involved in the unconscious processing of emotional stimuli (Wexler et al., 1992; Morris, Ohman, & Dolan, 1998), and in "implicit learning" (Hugdahl, 1995), this unconscious model is stored in right cerebral implicit-procedural memory. A body of studies reveal that the right hemisphere, "the right mind," is the substrate of affectively-laden autobiographical memory (Fink et al., 1996).

Implicit (procedural) learning is also a major mechanism for the incorporation of cultural learning, a process that initiates in infancy. Tucker (1992) asserts that social interaction promoting brain differentiation is the mechanism for teaching "the epigenetic patterns of culture," and that successful social development requires a high degree of skill in negotiating emotional communication, "much of which is nonverbal." Tucker concludes that such culturally transmitted social-emotional information engages specialized neural systems within the right hemisphere. I suggest that socialization is essential to not only advances in emotional-motivational development, but to expansion of the self. A recent neuropsychological study concludes that "self-related material is processed in the right hemisphere" (Keenan et al., 1999, p. 1424).

Furthermore, the activity of this "non-dominant" hemisphere, and not the later maturing "dominant" verbal-linguistic left, is instrumental to the perception of the emotional states of other selves, that is, for empathy (Schore, 1994; 1996, 1999a, 2000b). Current findings in neuroscience suggest that the right hemispheric, biologically-based, spontaneous emotional communications that occur within intimate interactions represent a "conversation between limbic systems" (Buck, 1994), and that "while the left hemisphere mediates most linguistic behaviors, the right hemisphere is important for broader aspects of communication" (Van Lancker & Cummings, 1999, p. 95).

The right brain contains a circuit of emotion regulation that is involved in "intense emotional-homeostatic processes" (Porges, Doussard-Roosevelt, & Maiti, 1994), and in the modulation of not only the biologically primitive negative emotions such as rage, fear, terror, disgust, shame, and hopeless despair, but also intensely positive emotions such as excitement and joy (Schore, 1994, 1996, 1997a, 1999a). Neuroimaging studies now show that the right hemisphere is particularly responsive to not only the positive aspects of touch, smell (Francis et al., 1999), music (Blood et al., 1999), facial expressions (Blair et al., 1999), and visual stimuli (Muller et al., 1999), but also for the negative emotional/motivational aspects of pain (Hsieh et al., 1995; Hari et al., 1997).

In securely attached individuals, the highest levels of the right brain, the right orbitofrontal cortex (Schore, 1994; 1998a, in press d, e) act as a recovery mechanism that efficiently monitor and autoregulate the duration, frequency, and intensity of not only positive, but negative, affect states. Its coping functions are most observable in contexts of uncertainty, specifically in moments of emotional stress (Elliott et al., 2000). In a recent issue of *Cerebral Cortex* on "The mysterious orbitofrontal cortex," the editors conclude that "the orbitofrontal cortex is involved in critical human functions, such as social adjustment and the control of mood, drive and responsibility, traits that are crucial in defining the 'personality' of an individual" (Cavada & Schultz, 2000, p. 205). This right lateralized self-system matures in the middle of the 2nd year. The regulatory core of the self is thus nonverbal and unconscious.

The functioning of the "self-correcting" right hemispheric system is central to self-regulation, the ability to flexibly regulate emotional states through interactions with other humans—interactive regulation in interdependent, interconnected contexts, and without other humans—autoregulation in independent, autonomous contexts. The earliest cultural learning experiences, affective transactions in infancy, may influence the balance of these two modes within different cultures. On an individual basis, however, the adaptive capacity to shift between these dual regulatory modes, depending upon the social context, emerges out of a history of secure attachment interactions of a maturing biological organism and an early attuned social environment. Researchers are now concluding that "the attempt to regulate affect, to minimize unpleasant feelings and to maximize pleasant ones, is the driving force in human motivation" (Westen, 1997, p. 542).

In closing I want to point out that I have described an optimal developmental scenario, one that facilitates the experience-dependent growth of an efficient regulatory system in the right hemisphere that supports functions associated with a secure attachment. On the other hand, growth-inhibiting environments negatively impact the ontogeny of homeostatic self-regulatory and attachment systems. Social environments that provide less than optimal psychobiological attunement histories, and generate prolonged episodes of unregulated interactive stress and heightened levels of negative affect, retard the experience-dependent development of the higher levels of the right brain that are prospectively involved in affect regulating functions (Schore, 1994, 1997a, 1997b, 1998b, 1999b, c, in press, e).

There is now compelling evidence that all early forming psychopathology constitutes disorders of attachment and manifests itself as failures of autoregulation and/or interactive regulation. I propose that the functional indicators of this adaptive limitation are specifically manifest in recovery deficits of internal reparative coping mechanisms. This can take the form of either underregulation associated with externalizing psychopathologies, or overregulation and internalizing disturbances. Such coping deficits are most obvious under challenging conditions that call for behavioral flexibility and adaptive responses to socioemotional stress.

This conceptualization fits well with recent models, which emphasize that loss of ability to regulate the intensity of feelings is the most far-reaching effect of early trauma and neglect. These models suggest that this dysfunction is manifest in more intense and longer lasting emotional responses, and that defense mechanisms are forms of emotion regulation strategies for avoiding, minimizing, or converting affects that are too difficult to tolerate. I suggest that these functional vulnerabilities reflect structural weaknesses and defects in the organization of the right hemipsheric regulatory system that is centrally involved in the adjustment or correction of emotional responses.

The right hemisphere, the substrate of early attachment processes, ends its growth phase in the 2nd year, when the left hemisphere begins one, but it cycles back into growth phases at later periods of the life cycle (Thatcher, 1994). This allows for the continuity of attachment mechanisms in subsequent functioning, and yet also for the potential continuing reorganization of the emotion-processing right brain throughout life. Future research of the continuing experience-dependent maturation of the right hemisphere could elucidate the underlying mechanisms by which certain attachment patterns can change from "insecurity" to "earned security" (Phelps, Belsky, & Crnic, 1998). However, this system is most plastic during the early critical periods of its maturation. Current brain research indicates that efficient right brain function is centrally involved in the control of vital functions supporting survival. Early interventions that focus on social-emotional development would have enduring effects on the adaptive coping capacities of a developing self throughout the lifespan.

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Barnard: Our time is gone, so I will give the discussion I had planned during the conversation hour this afternoon. I am very moved by the content of Dr. Schore's work and by his presentation this morning and it reinforces in my mind that in Early Head Start we have been working on the wrong part of the brain.

I believe we must consider a revision of our programs in Early Head Start. My observation is that we are working in Early Head Start primarily with adults who have right brain problems. How we make the transfer of this information to work with both parents and their infants who are dominantly functioning with right brain is a very important issue for the future. Thank you.

Plenary II

The Importance of Context For Good Science: Studying Children and Families Across Settings

CHAIR/DISCUSSANT: Suzanne Randolph
PRESENTERS: Cynthia Garcia Coll, Gloria Johnson-Powell, Spero Manson

- **Explaining Surprising and Unexpected Findings: Lessons From Research in Diverse Contexts**
  Cynthia Garcia Coll
- **Children, Youth, and Families From the African Diaspora: Examining Context for Research and Service Delivery**
  Gloria Johnson-Powell
- **Bridging Different Ways of Knowing: Integrating Qualitative and Quantitative Research Methods**
  Spero Manson

Suzanne Randolph: Imagine young children and their families with whom or to whom we apply our science. When we come into their worlds and ask them to pause their lives and respond to our dictates and our paradigms, and when they pause or close their eyes, out comes gaga, baba, gaga. Today's distinguished panel will help us to understand further the importance of context for good science by presenting work from their experiences in studying children and families across diverse settings and diverse backgrounds.

We begin with Cynthia Garcia Coll, Professor of Education, Psychology, and Pediatrics at Brown University. For more than 20 years she has been conducting research with high-risk and minority children, and recently has written a book entitled, *Mothering Against the Odds*. She will talk with us on the topic, "Explaining Surprising and Unexpected Findings: Lessons From Research in Diverse Contexts."

Cynthia Garcia Coll: Two years ago at another national conference there was a heated and very interesting debate on the topic of, "What is good science?" I will try to capture the two positions so that you get a sense of what we are talking about.

One side was saying that good science is standardized; it controls. When doing an assessment one controls for the environment and any distractions. One looks at psychometric properties like internal reliability and internal validity. One should also insure that the measures used are good in the sense that everyone agrees that they do contain these psychometric properties. These measures allow the opportunity to objectively measure what is going on with the child's development, with the family's status, and to further determine whether an intervention is working or not. Most of the time, rather than looking at what is happening during the intervention, the child is removed to a quiet place or to a place where there are fewer distractions, and the assessment takes place there.

I will polarize the argument, even though in the discussion this was not quite as clear-cut. The other side said, "Many times when we take children out of their context, they do not do what we want them to do. These children may not do as well as we know they can. We know that they can do the task because we were just watching them on the floor of their classroom doing the task. We know sometimes that when we put families through our screens or lenses (a questionnaire for example), they will not tell us what is going on, but then when we are having coffee on the corner with them, all of a sudden they will tell us everything we wanted to know."

If one does not take into account the context of the intervention, one might think that the intervention has failed. If one does not look at the pressures that are going on in people's lives, and take into account that interventions are not delivered in a vacuum, then one might actually interpret the results as an indication that the intervention is not working. However, if one takes into account the context of a family's life, the conclusions might be quite different and actually show that the intervention did work.

That discussion was very heated, with arguments going back and forth. At the same time, we were trying to talk about how context should be important for everybody. It does not only apply to research with minority families, and diverse groups. We are all diverse. I remember in Puerto Rico making fun of Americans because they were all wearing shorts, plaid shirts, and tennis shoes, and carrying Brownie cameras. That was my view of them because that was all I saw.

We have been talking a great deal during this conference about experience and how much experience makes a difference in the lives of children and families. We have managed to talk about experience as something that is around the child, something that is between a child and a caregiver. I am going to talk about conceptualizing the experiences of the child and the caregiver in terms of multiple concentric circles. Those of us who know the work of Bronfenbrenner have that image in our minds. If one does not take all of those circles into consideration when looking at how children are doing, how families are doing, and the impact of our interventions, we might be losing a large amount of information. I call these "surprising results."

Part of the argument was how do we interpret less than optimal performance in standard measures by children and parents of diverse backgrounds? The prevalent interpretation has been that these children or parents are somehow deficient if they do not score at a certain level of attitudes, behavior, or knowledge on our standard measures. Are there alternative ways of explaining such deficits, such as differences between performance and capacity in a particular context, or alternative pathways to competence? What about when one is flying in the face of adversity and gets relatively good outcomes—are these outcomes solely the function of a particular individual or family?

My thesis is that in order for us to do good behavioral research, we need to seriously and systematically measure context. By context, I mean the several layers of influence that go beyond the family, inclusive, but not exclusive, of things like housing, neighborhood, health and educational systems, status within society, and sources of oppression or stress. This is applicable to many research questions when measuring developmental outcomes, as well as parenting or the effect of an intervention. It is as important in basic research as it is in evaluation research, and in an era of accountability, can mean the difference between showing that a program is effective in some circumstances and not in others. In other words, I believe that measuring behavior out of context is as absurd as taking a fish out of water to measure how it breathes.

It is puzzling to me that measuring out of context is so widespread. Our training, our academic journals, our institutions, and professional practices herald the notion of controlling for the environment and taking objective measures. This problem occurs despite many theoretical frameworks and empirical findings that tell us the importance of context. For example, we have the work of Bronfenbrenner, Sameroff, Chandler, and organizational and life span models of development that are all saying that context is an important and intricate part of developmental processes. Yet, we continue to measure developmental status with foreign objects in foreign places. We minimize distractions. We remove the child from their natural environment to objectively assess child status. We measure the impact of an intervention without taking into consideration the multiple important factors that effect people's lives. We basically remove the plant from its soil, its sources of light and water, and we assess how it is doing. Some plants do fine, others wither and die, but we attribute the developmental outcome to the plants themselves. I am really trying to understand why we continue to make these theoretical and empirical distinctions that do not make any sense, particularly in the work that I have been doing.

Some of you might say, "Well, we really do measure the environment. We measure parenting, we measure social interactions of children, we measure social interactions with teachers, and sometimes with other significant people in their lives." What is interesting for me is that these caregiving interactions are measured, for the most part, separated from the larger picture of life. As researchers, we are evaluating the performance of children, parents, and other caregivers, independent of many other factors that are creating the circumstances to which people respond.

I think of myself as a cultural anthropologist, even though I do not have a degree in that field. I look at and observe our culture from the outside in. I view most things from an anthropology perspective, and I think that this is because the social construction of individualism is so strong. We think that individuals create their environment because that is culturally appealing to us. Despite large differences between psychology and other more environmental sciences, we continue to try to look only at the individual. Perhaps it is our need to prove to ourselves that we are practicing real science; that we can control everything else as other sciences do. For me, it is a puzzle that I have been struggling with in my research over the past 20 years.

This presentation follows my own developmental history of grappling with the issue of context. I have not come up with all the answers, but I continue to struggle with it. The contextual measures I am presenting are from the individual perspective in context, so it is perception of context that I have been using. The children from an earlier study are probably now about 30 years of age. I attended graduate school in the United States, having come from Puerto Rico, and I decided to take all the knowledge I had gained from my training and return there to do research. I was going to be working with teenage mothers, and was interested in how teenage childbearing affected the infant from the very beginning—from obstetrical complications to neonatal behavior to 1 year of age.

Based on the literature, my hypotheses were that teen mothers were going to have more obstetric complications; that the infants would have negative neonatal behavioral characteristics such as irritability and disorganization; and at 1 year of age, that the infants would exhibit similar negative behavioral characteristics.

I want to tell you about the population characteristics because unlike others, I feel that it is extremely important to describe one's sample in as much detail as possible in order to give a true sense of who the subjects are. These were mostly low-income mothers, having their first infants. They were in an urban setting in San Juan. For some of the studies, of a total of six or seven studies, the adolescents were less than 20 years old; for some, they were less then 18 years old. Some mothers were over age 21, but they were having their first child.

What was striking was that we found that the teen mothers and the older mothers were having the same obstetric outcome. There was no difference between the two groups. The second surprising finding was that the infants of the teen mothers sometimes actually looked better on the continuums of disorganization and irritability, and so forth. Actually, at 1 year of age, the infants appeared exactly the same on those measures. At that time, I was trying to write my Master's thesis. I decided there was something wrong with the picture. I saw that these mothers were surrounded by many relatives, and when they went home, there were parties that everyone would attend. These were mothers from 13 to 20 years of age. So I went back and started measuring the context from the mother's perspective.

We found that for both groups 80% of the mothers were married, and 40% lived in extended families. There were no significant differences between the two groups of mothers. For example, we asked them, "When you became pregnant, what was the initial reaction of your significant other—your extended family, your partner, your parents?" There were no differences in the reaction to the pregnancy, and in both groups, 80% reported that the reaction was extremely positive.

When asked who they expected to help them care for their child, there were also no differences. The number of people expected to help with the baby were at least two, on an average, for both teen mothers and older mothers. When we talked about life stress, in terms of the theory and empirical findings that were dominant at that point, our groups once again showed no difference. What was important was the number of people and frequency of help the new mother received, the social support. When the mothers of all ages were asked, "What is the best time to have children?" most of them, about 70%, thought that early was best. Some of them even told me that they had been trying to get pregnant for 5 year—these were 21-year-olds. I always have to say at this point that I am not pro-teenage pregnancy. However, these results point to the importance of measuring context in order to understand what is happening in people's lives, and what issues are important to them.

We then measured mother-infant interaction, and again found few differences between the two groups. These small differences were not necessarily in the actual behaviors, but in the quality of their behaviors. The teen mothers were a little clumsier with their infants, showing a lack of experience. However, in terms of the actual behaviors, mother's age within teen mothers was not a predictor of child outcomes. It was instead the number of supportive adults and previous caretaking experience that was important. In other words, we found answers in the context of their situation. For them, being part of an extended family and community was important. These finding also held up for the quality of mother-child interaction.

In Providence, our population was mostly White teenage mothers, and the context was a little different. We looked at what was affecting their face-to-face interactions. We found that for face-to-face interactions of mothers and their infants, mothers' access to child care support and ego development (i.e., mother's psychological maturity) was much more significant. Yet again, the questions are: Who is involved in child-care support? Who is involved in other kinds of support? What role does maternal education play in parenting? For example, if the mothers had an opportunity to remain in school, they did much better as mothers. This was the model that worked in Providence, one that addressed child care support, life stress, and the home environment as explaining the developmental outcomes of infants at 8 months of age.

Another set of interesting findings came out of a study done in Boston with colleagues from the Center for Research on Women. This was a study of low-income 13- and 14-year-old Puerto Ricans, with the majority born in the United States, living on public assistance, and with 46% living in single parent households. There were very strong family values stated by the children themselves, along with a very strong ethnic identity. From the caregiver's perspective, there were no complaints about their environment, in terms of living conditions or violence, because their frame of reference came from living in impoverished environments in Puerto Rico. Their perspective was that compared to where they were raised, their life was great—with strong family ties, values, and a strong ethnic identity.

When these children were compared with samples in Massachusetts, we found that they had reported a lot less risky behaviors. Community perceptions of these children were that they were into a lot more risky behaviors, but they actually had less sex, drank less, smoked less, and carried a weapon less. Findings were the same in terms of school attendance. One of the things that I want to stress is that the studies I do are community-based, and are not necessarily on the populations and samples that come through referrals.

In another study we used two measures—one of attachment to peers, and the other of attachment to parents. We found that as in other adolescent samples, attachment to peers increased with age. Also, over time, which is at 13, 14 and 15 years of age on average, parental attachment increased. Again, we discussed this in the context of strong family values, strength in sense of culture and sense of self, and how attachment to peers did not have to mean separating, becoming autonomous, or leaving the family behind. This is a very different kind of attachment pattern than we traditionally see in the literature on teenagers. One of the things that we found was that as parental attachment increased there also were changes in how much adolescents identified as Latina or Hispanic, as well as their pride in that identity. At the same time, traditional family values were increasing.

The findings I am reporting occur within the context of a strong family and cultural identity. This was in spite of adolescents' feelings that they had experienced discrimination in their communities. They were very aware of the stereotypes that were expressed about teenage pregnancy, but for whatever reason, they had a buffering zone, and that made the difference.

I hope that the message that you take from this talk is that we need to go beyond what we are doing right now. This is an era of accountability, where research and evaluation are going to be impinging, not only on researchers, but also on everyone who receives outside funding. We must measure the life of our clients, our children, and our families far beyond the traditional scope. By doing this, we will be able to assess the success of our interventions in a much more valid way, whether they be home visiting or center-based programs. I am also hoping that, as we talked yesterday in our symposium about mixing methodologies, we will be less isolated in our research and create many more interdisciplinary collaborations.

Randolph: Our next presenter will be Gloria Johnson-Powell, an M.D. and Professor of Child Psychiatry at Harvard Medical School. She is currently on sabbatical at the Chapin Hall Center for Children at the University of Chicago, where she is doing research on cultural competence in health and human services for children and youth. She is also beginning a pilot study of African immigrant children in families in the Chicago area. Dr. Johnson-Powell has spent her career providing services to culturally diverse children and families, and her latest publication is *Trans-Cultural Child Development*, published by John Wiley. What you may not know is that after her sabbatical she is moving to the University of Wisconsin to become the director of the Center on Race and Ethnicity in Medicine. She will now speak about her work on families from the African Diaspora.

Gloria Johnson-Powell: First of all, I want to give you some background about why I am talking about children from the African Diaspora and the issue of context. All of this has come about serendipitously for me in my personal awareness, as well as my professional awareness, of the importance of understanding where people live, how they think and feel, and what mediates their decisions from day to day. Part of that has to do with the fact that I was born into a family that received public assistance. We were one of the first African American families in the country in 1939 to receive public assistance. People have written about me as being a vulnerable child, but I do not feel that way. I feel that most of the children that I grew up with in Roxbury were pretty much like me. They went to school, many to Girls Latin School or Boys Latin School, then on to college, and now are part of Who's Who in African American history. What I realized as I got older, however, was that the prevailing view of people who were poor, or who were on public assistance, mitigated the expression and the literature about what was going on with these families. Yet, the kind of home that I grew up in was as middle-class as you could ever get in terms of aspirations.

I have always asked questions when a pejorative reason is given for behavior: "Where did they grow up? Did they grow up on an Albert Street? What are the day-to-day contextual issues that they live in?" This certainly stood me in good stead when I did my study on school desegregation. Did you know that we found that Black students in all-Black schools in the South had the

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highest self-concept and succeeded more in academic achievement than Black students in desegregated schools in the South, and in desegregated schools around the country? Context. When we looked at the context we could begin to explain it.

I spent 4 years in Africa doing pediatrics, child psychiatry, OB/GYN, and so forth. If you have an M.D. from an American medical school, your friends and colleagues in Africa say you have an IBA. That means I've Been to America so you can do anything. That may seem funny, but when I finished medical school, I went straight to Ethiopia and began to practice OB/GYN and pediatrics, and the joke turned out to be true. I was working with two New Zealand physicians who were doing fistula repairs on Ethiopian women. You see, Ethiopian women lie in their villages for a long period of time with pelvic dystocia and end up in a week with a dead baby and a perineum that looks like the cloaca of a frog. I was working with doctors every day doing all these fistula repairs.

When I got home to my internship, I delivered a baby who was breech for the chief of OB/GYN. He said to me, "Oh, my patient loved you so much she said she wants you to go into OB/GYN and she is going to go to you because she says you do a better job than I do. I am going to let you scrub in on a very important surgery." I asked what kind of surgery, and he said it was a fistula. I told him that if I never see another fistula repair it would be too soon. He said, "Young woman, what do you mean?" I told him that I had done 69 fistula repairs and that was it for me. Later I realized how youth is wasted on the young. In the context of America, for all groups, fistula repairs are rare. But in the context of the mountainous regions of Ethiopia, there is an excessive amount of pelvic dystocia because of the way the pelvises of the women are built.

During my entire 4 years in Africa, I rarely saw any hypertension. In Tanzania I did not see it. In Kenya I did not see it. In South Africa and West Africa I did not see it. The only time I saw it was in Ethiopia with Ethiopian women from the royal family who were not eating an Ethiopian diet and had preeclampsia. I never saw diabetes either. I said to myself, now, what is this? I went to a Black medical school and that is all we saw—hypertension and diabetes, but this was not so in Africa.

I also observed, because I had to work in the newborn nurseries, infant development. If I did not see the infant by the time s/he was 6 months old, the moro reflex was gone. I would make a big deal trying to find out who had delivered. I said to myself, "Go there and see how many children you can count with the moro reflex." Sometimes I missed them all for that week. There is something about context that we have to understand. The infants were five pounds at most; possibly the mother had been near starvation during pregnancy, but they had these strong, neuromuscular infants. They develop the stepping reflex way ahead of time. I was going crazy, and the medical students at the hospital thought that I was a crazy American doctor. I told them to come with me to the Ocean Road Hospital to see the moro reflex. They said, "Hmmm, what is she talking about?"

All of this brings us to why then look at children from the African Diaspora? The United States is the third most populace nation in the world after China and India, and it is expected that immigration will be the most likely factor to increase population growth over the next several decades. It is also expected that of 124 million additional people estimated to be living in the United States by the year 2050, 80 million will be the direct or indirect consequences of immigration. However, one of the major aspects of the current and projected immigration rate is the browning of America, a term used by some demographers to describe the changing ethnic/racial composition of the population because of the increase of immigrants from non-European countries. The social dimensions of today's immigration patterns have become very controversial, especially as they pertain to ethnic/racial compositions. Given the history of ethnic/racial relations in the United States, it is important to address the impact of immigration on the old minorities, as some demographers call those of us who are third or later generation Latin American, African descent, Native Americans, and so forth, as well as the new immigrants, especially as it affects the psychosocial development of children.

Our inquiry begins with a small, but growing number of Black immigrant children in families from the Caribbean and from sub-Sahara Africa, and their ethnic socialization and cultural identity. Will the newest Africans, without a slave history in this country, fare better or worse than the descendants of slavery? Will they face more discrimination than those who are descendants of slaves? What are differences and similarities of the nation's reaction to them? Is the acculturation and assimilation process more difficult than for other ethnic minority immigrants? Are they able to overcome the vicissitudes of racism and the caste assignment that it brings? As we enter this 21st century, what can we learn from their experiences about ethnic socialization and the cultural identity of their children adapting to a caste-like society? What are the human relations efforts in cultural education that are needed to build a multicultural society for all of us?

We all have been touched by the alleged murder of a 22-year-old African male by the New York City police in 1998. Several years before that, there was the terrible incident with a Haitian immigrant in New York City. This only begins to highlight some of the difficulties that Black immigrants are having in our country. How are they dealing with it, and how can we understand the context in which they live and the consequences for their children?

In 1990, 2% of children in immigrant families came from Africa. The total number of children from Latin America was 51.3%, but the percentage of those Latin Americans who were Black is not specified. However, the number of first and second generation immigrants are from 62 countries, including the Dominican Republic, which we know has a significant number of Black immigrants; Jamaica; Haiti; Trinidad and Tobago; the Honduras'; Guyana; Panama; Nigeria; Costa Rica; Belize; South Africa; Barbados. What a diverse group of Black immigrants coming to this country today.

The total number of African American immigrants in 1990 was 35,893. When you look at the rate and how high it is, and how rapidly it has expanded over the past 10 years, it is incredible. However, one then has to understand what is going on in Africa. The 1997 current population survey indicates that 6.8% of the Black population is foreign-born. Black immigrants and their families make up 11.2% of the total Black population. Indeed, immigration from Africa nearly doubled between 1994 and 1996, increasing from 3.3% of total immigration, or 27,000, to 8% or 53,000. The 1996 census data showed four major countries of origin for Black immigrants, which also ranked in the top 30 countries. Those four countries are Jamaica, Haiti, Nigeria, and Ethiopia. It is very interesting to see Ethiopia emerge among the four countries, because it had not been listed previously. However, from 1994 to 1996, with all the upheaval in Ethiopia, we saw a large group of Ethiopians coming to this country. One must remember that you do not just say Ethiopian, you also say Eritrean. What one calls them, and how one disaggregates the data with Africans and with Caribbean immigrants, is very important.

In the greater New York metropolitan area, 27% of the Black population is foreign-born. Indeed, Black immigrant families with children represent 43.7% of Blacks in metropolitan New York—that is half. Surprisingly, as of 1990, many first- and second-generation children of middle-class or luxury-level families came from African and Caribbean countries. Of great importance is what they called themselves in the census, or what they responded to about their ancestry. Part of the difficulty when Black immigrants come to this country is that they feel forced into defining themselves in a narrow context of American racial discrimination.

When one looks at the countries of origin for immigrants with middle-class or luxury-level incomes, South Africa is at the top. We do not know how many of those from South Africa are Black Africans. Probably most of them are Jewish families. During the 1970s and on, large numbers of South African Jews left South Africa because of apartheid.

When the data of immigrants from Barbados are disaggregated, one begins to see something different than the stereotypic view that you have of the African American population here. Families from Barbados are close to 70% in the middle-class or above. Also, 60% of the families from Panama are middle-class or above; so too with Guyana (59%); Jamaica (58%); and

Trinidad and Tobago (close to 58%). We do not know how many Black immigrants come from Costa Rica, but we do know there are some, and 55% of families are middle-class or above. From Nigeria, the rate is 50% of the families; Belize, 47%; and Haiti, 40%. That was the 1990 census. If you were to look at the census now you would see that there were many more African families represented in the levels of middle-class or luxury incomes.

Waters, in her new book on Black identities, *West African Immigrants And Their Children*, says, "Ethnic has generally referred to groups defined by cultural attributes while racial groups have been defined by physical attributes. Ethnic groups share practices, languages, behaviors, or ancestral origins. Yet, Americans have generally paid a great deal of attention to ethnic differences among Whites, while treating Black Americans as if they are a racial ethnic group with no differences."

It is very interesting to hear the director of the NIH Genome Project say that there is no such thing as race. The word is culture and ethnicity. There is no biological basis for race. He says that the idea of biological races was created during the 1700s when the slave trade began, in order for Christians to justify slavery in the new world. Those are big statements.

Thus, in the census, the categories of African Americans are glossed over and subgroups are not defined ethnically as West Indian or Haitian. The Guyanans do not like to be called West Indians because they are not from those islands, but they go along with it. The Haitians do not like to be called West Indians because they think they are Haitians. The other groups will sometimes go along as well, but they prefer that you call them by who they are, Jamaicans, etc., because they feel there are distinctions among them.

Spencer and Dornbush, in their discussion on ethnicity in adolescence, pay particular attention to the cultural ecology of minority groups and begin with the thesis that, "Ethnic minorities which differ in their history and in their sociocultural condition are not alike." They point to the variability within ethnic minorities and urge that the conventional group categories be disaggregated, placing more emphasis on ethnic specificity by noting that the visibility of the group and the history of the group, as well as the ethnic group's distribution in society, shape their experiences.

Others have suggested and highlighted the important distinctions between autonomous minorities, in a numerical sense only, those who come to America of their own volition to improve their socioeconomic or social status, and caste-like minorities who were involuntarily incorporated into the American society. Ogbu has noted that African Americans, Native Americans, Hawaiians, and Mexicans have a status that has not been assigned by legal or extralegal circumstances, since these groups are in America due to slavery or conquest.

Although many immigrant minorities have been assigned to menial positions similar to caste-like minorities, the consequences of the negative connotations have been different because of the differences in the historical experience. We find as we look at the research done by Waters, and others, that West Indian immigrants do much better than African Americans, and they point to their cultural values. Waters points to the achievement of West Indian immigrants, but also highlights the difficulties that they have with racial discrimination, which impedes the development of their children, so that second-generation West Indian immigrant children are not doing as well as the first generation. They lose faith in the public schools, and lose faith that they can achieve and assimilate. Waters has noticed that those West Indian immigrant children who do not become Americanized are those who do better both in school and economically. This theme is echoed by other immigrant groups, and indeed, there is much being written about the Americanization of youth and how detrimental it is to their academic achievement and to their mental health. Looking at Hernandez' book on the social and educational well-being of third generation immigrants across the board, with few exceptions, one sees a higher incidence of high-risk behavior and lower achievement in Americanized youth.

What does this tell us about looking at context? We have to look at context in several ways: not only where people live in terms of their physical space, but also where they live in terms of their cultural beliefs, their habits, and their goals for themselves and their children. This is relevant because many of these immigrants live in low-income areas, and cannot get the kind of housing that they want. A sociologist at UCLA has just done a study of Vietnamese children in Louisiana that points out the same thing—the closer they stay to their cultural background and values, and the less Americanized they become, the better their achievement and social outcomes.

This means that all of us have to begin to look at what it is within our society that mitigates the academic achievement of most American children, and what prevents us from achieving the goals that we strive for, for children of every ethnic and cultural group. Context is important, but it is not just physical context; it is also values and beliefs, and they are being reinforced in the immediate communities in which children, youth, and families live.

Randolph: Lastly, we will hear from Spero Manson, a medical anthropologist. He is a professor, and head of American Indian and Alaska Native Programs at University of Colorado Health Sciences Center. He is Pembina Chippewa, a father, and about to become a grandfather.

Spero Manson: I have the advantage of the context being set already by the two previous speakers, whom I think very eloquently described the range of issues before us, and the importance of context. I hope to illustrate for you the importance of context within a series of projects. There are three, specifically, that I have had the privilege of being involved in over the last 20 years. I have learned about the importance of context in making sense of the findings from these particular studies.

In addition, I wish to illustrate how we can, and must, begin to marry the various investigative methods that are available to us. No single set of methods alone provides us with sufficient power to unravel the importance of context as it contributes to our understanding of the meaning of human behavior, whether it be at the level of the individual, the family, or the community.

Eleven years ago, I had the honor of contributing to a study looking at the social and psychological impact of the Exxon Valdez oil spill on Native and non-Native communities; on the households, and on the families themselves. First, I will illustrate in the context of that study how critical it was to have an ongoing parallel set of ethnographic inquiries being conducted in order to shed light and make sense of what emerged epidemiologically. Second, I will share with you the results of a longitudinal study with a number of different high schools around Indian country called, "The Voices Of Indian Teens," representing five different cultural areas. Specifically, I will share with you the results of data on risk of suicide as embodied in the context of suicidal ideation. I will illustrate how, in the early stages of the project, key informant and ethnographic interviews and participant observations were critical to identifying some of the most salient risk factors for suicidal ideation. In fact, the differences that we observed across three major cultural groups can only be understood through the additional insight provided by the up front work to articulate culture-specific domains of measurement as they relate to risk.

I will close with work in progress that moves us forward in time to dealing with infants. The work that Robert Emde, my colleagues, and I are involved in has broadened our horizon. We are working with mothers and their infants, as well as their children-to-be, to try and understand the nature of parenting and child development, and the kinds of models that parents have with respect to their relationship with their children, as a point of departure for informing subsequent interventions in the earliest stages of life.

Let me begin with the Exxon Valdez oil spill. I think most of us know that in March of 1989, an Exxon oil tanker struck a reef outside Valdez in the Prince William Sound area of Alaska, spewing more than 11 million gallons of crude oil into a relatively pristine environment.

In this particular endeavor, a group, called the Oil Mayors Group, funded by the Federal Emergency Management Area, represented the twenty-some villages that were physically touched by the oil spill itself. We heard a great deal in the news about the impact of the oil spill on the flora and fauna, but we heard very little about its impact, physically or otherwise, on the human inhabitants of the Prince William Sound area. This study, conducted under the auspices of the Oil Mayors Group, in conjunction with a group called Impact Assessment, sought to ascertain the social, economic, and psychological impact of the Exxon Valdez oil spill on the Alaskan Native and non-Native village residents. I trust that most of you can conjure up the visual images from TV and the media. It was at that time the largest technological human-made disaster in our experience.

The particular study design we adopted included the 20 villages that had been physically touched by the oil spill, and four control villages in the same environment that had not been physically touched. The study involved a random sample of households in the 24 villages with an oversampling of Alaskan Natives.

It entailed face-to-face interviews that included a diagnostic status and an assessment of risk and protective factors, as well as an assessment of such things as subsistence activities, a critical factor in that environment. The data were collected between April and July of 1990, and participation rates were very high. The subjects in this sample were from 18 to 76 years of age, with a mean age of approximately 32 years, with just slightly more females than males. Nearly 40% were Native, and about 60% were non-Native.

In addition to actually cleaning the beaches of the oil itself, there was the enormous task, and a very emotionally wrenching task, of actually clearing the beaches of all the dead birds, seals, and fish that had washed up. The risk factors that we looked at, including age, gender, and household structure, were the nature and extent of the exposure to the oil spill and other stressful life events. We also measured ethnic identity, locus of control, self-esteem, social support, and a series of factors related to social pathology such as substance abuse, antisocial behavior, depressive symptoms, and post-traumatic stress.

To give you just a brief flavor of what the results indicated, controlling for the presence of psychiatric histories pre-oil spill, we found that post-oil spill there was an incidence of generalized anxiety disorder of approximately 19.2%, of depression of about 17%, and of post-traumatic stress disorder of nearly 10%, aggregated across the Native and non-Native residents in the villages. When the samples were disaggregated, the Native compared to the non-Native rates post-oil spill, again controlling for prior psychiatric history, we saw dramatic differences between the two segments of the population with respect to all of the major psychiatric disorders. Native residents had significantly higher levels of generalized anxiety disorder, depression, and post-traumatic stress disorder.

The question became, what contributed to that kind of difference between the Native and non-Native expressions of stress through psychiatric disorder, in terms of their response to this particular disaster? If we had been left with the quantitative data alone, we would not have been able to disentangle that conundrum. But, in fact, as our ethnographic work proceeded, we discovered, as one elder shared with me, a salient way of understanding and making sense of this difference. The elder said simply, "You need to know first that both Native and non-Native members of these villages actually engage in what are called subsistence activities, where they will go out and take a moose or a seal, they'll fish or they'll harvest berries, roots or mollusks, as a way of supplementing their Western market-based diets." He went on to say, "You have to understand that when we do that, it is I, as a grandfather, going out with my son and my grandsons to go and gather a seal or to fish. In the process of doing that, we remind ourselves through stories and tales of who we are in the world; that we have a relationship to the fish, we have a relationship to the seal, we have a relationship to the shore, and these relationships define and reaffirm who we are, both past, present and future."

An older elder woman said virtually the same thing in talking about grandmothers, daughters, and granddaughters going out together. As they harvest the berries, as they gather the mollusks, what they are in fact doing is recreating their place in the world through tales.

This is the acculturation that occurs in the transmission of values from one generation to the

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other. It was the disruption of this that occurred for the Natives, as opposed to the non-Native members, of these impacted communities. This led to the much more salient consequences in Natives, and is represented by the differential expression of psychiatric disorders in the two groups. Without that ethnographic work, we would not have had the context in which to understand the meaning attributed by these different segments of the population to what we would otherwise presume to be a similar, if not the same, set of experiences.

A second example has to do with the experience of suicide in Indian and Native communities, a phenomenon that has been widely publicized in the media. In this study, one objective was to describe the cultural variations and factors associated with suicidal ideation among American Indian youth. Indian youth, like many youth from different cultures, struggle to live in two different worlds, to acquire a sense of competency, and to master the developmental skills, the social knowledge, and the interactions that characterize the different worlds in which they live. This is often not an easy struggle. The study involved school-based surveys in four tribal and public reservation schools. It was a self-report questionnaire that contained 26 constructs about a wide range of life experiences. Data were collected in November 1993. The sample was drawn from an 8-year, longitudinal study still being done, with biannual surveys, as well as ethnographic work. Again, we had a high participation rate for a study of this nature.

To give you a flavor for the characteristics of the participants, there were nearly 1400 youth ranging in age from 13 to 20 years, with an average of 16 years, with slightly more females than males. The work took place with three different cultures: the Southwest, the Northern Plains, and the Pueblos. The youth in question were attending schools that were predominantly characterized by the particular cultural group of which they themselves were members.

Risk factors that were of interest to us, both in the survey and the ethnographic work, included the following: age, gender, household structure, suicidal ideation, stressful events, identity, locus of control, self-esteem, alcohol and substance abuse, and so forth. Suicidal ideation was operationalized with the Suicidal Ideation Questionnaire (SIQ) a very brief, but it turns out for us, powerful measure developed by Reynolds. This is a straightforward measure that asks about individual experience of suicidal ideation and plans in that regard over the previous months. It covers thoughts about methods and timing of suicide, whether a note or a will was written, and whether or not the individual in question told others about his or her plan. Those individuals who were screened positive, reporting at least two of these six thoughts about suicide at least a couple of times a week over the previous month, were the focus of the subsequent analyses.

What became clear in our analyses was that there was no single correlate of suicidal ideation that was common to youth in all three tribes. That finding really surprised us. As we began to deconstruct the finding, to begin to unwrap its meaning, we found that what made sense was that the risk and our observations of suicidal ideation varied systematically with our ability to understand and put those findings in context. This meant looking at the social structure of the tribal community itself: the extent to which the tribal community subscribed to individual or collective notions of self and gender roles, the role and importance of their support systems, and their particular view on death and its conceptualization. For example, in looking at social support among the Pueblo group, one finds that youth who reported the highest suicidal ideation were also those who reported the lowest amount of social support. These findings went hand in hand because the Pueblo groups are among the most tightly knit of these three tribal communities. Therefore, the extent to which the youth do not experience social support is strongly related to suicidal ideation. This is not the case with, for example, the Northern Plains group, who live in a much more dispersed, much less integrated social fabric. In the third group, the Southwest, antisocial behavior was strongly correlated with suicidal ideation, particularly to the extent that these youth had thoughts about death and dying. In that community, having those thoughts was deviant because from the very earliest ages, children are taught not to think about death and dying.

What we may take from these findings is that one has to be able to have contextual information in order to understand the complexity and the differences among groups, and to anticipate the variations among communities.

On a more positive note, I would like to describe our recent work in collaboration with, and under the direct guidance of Robert Emde. We are moving forward in a more positive, proactive fashion by addressing the needs and issues of infancy. This effort has been named, Raising A New Generation (RANG). It's primary objective is to describe local beliefs about child development and parenting in the social and emotional environment in which infants and children are raised in Native communities. We hope to understand those environments, in order to either implement interventions that are available and will transfer to these communities, or to develop new interventions based on these new understandings.

In this instance, we are involved with approximately 30 pregnant women, their husbands or partners, and a young Native clinical psychologist in a Northern Plains community. We are now interviewing grandparents with semi-structured, home-based interviews, at multiple times during the pregnancy and after delivery. The study also will include, when the infant is 18 months old, an observational period in which mother and infant interactions are videotaped and subsequently examined with respect to interpersonal caregiving behaviors and relations.

In many Native communities, and this one is no exception, there are moral and behavioral codes. Among my people, the Anishinabe of the far North and the eastern woodlands, you know us as the Chippewa, there is the notion of integrity. It is this set of expectations, rooted behaviorally in concrete ways of living, which serve as a marker for our development over time. As infants, we are given the names of members of our communities who are no longer there, but who embody a set of moral characters and virtues that we are expected to aspire to as we follow the road to living our lives of integrity. Among the Navajo and the Hopi, it is referred to as the Corn Pollen Path. Among people of the Northern Plains such as the Lakotas, it is referred to as the Red Road. These are pathways articulated culturally by communities about the way in which one should aspire to develop in terms of character, morality, and behavior. In addition, those responsible for the child are expected to provide reinforcement of these virtues. In my community, we have something called the First Laugh Ceremony. They also have it among the Navajo. When the newborn first laughs, the person responsible for making her/him laugh becomes the equivalent of a godparent, and is then responsible for mentoring the child throughout his/her life.

I would like to end with the notion of the circle of life in Indian and Native communities. The road that we travel from conception through our final years has points of responsibility, whether it be the Red Road or the Corn Pollen Path. In fact, we can engage in sophisticated epidemiological surveys or in sophisticated multifaceted interventions, but unless we take on the challenge of marrying qualitative and quantitative techniques, we will be handcuffed in our ability to understand the outcomes of our epidemiological or intervention work. Therefore, I suggest that it is not only an interesting, but also an exciting challenge to engage in. It represents the kinds of challenges that are before us, not only in Head Start, but also in the other interventions that we may engage in, in trying to improve the lives of all people in ways that are meaningful to them.

Randolph: What I heard was surprises, serendipity, and spilled oil. Therefore, I entitled these discussant comments as, "Don't cry over spilled oil." In the Western traditional sense that would mean do not worry about it, there is no reason, it is just spilled oil. But as we have heard, it is very important to worry about it. It is very important to worry about context as we do our science. Garcia Coll mentioned for instance, that she looks at it as taking a fish out of water to watch it breathe. Following this spilled oil notion, I thought maybe it is spilling oil into the water and trying to watch the fish breathe. That is what we may be doing when we go into communities, or when we bring them to the laboratories or settings where we do our research.

I am couching my remarks in terms of both the implications for practice and policy. With respect to practice, we need to start at conceptualization of research design and methods in terms of the questions we ask, but also we need to questions the conceptual frameworks we use. As Manson has suggested, we need new ways of knowing, we need new ways of thinking. Garcia Coll suggested perceiving. Johnson-Powell suggested that we also need new ways of just doing things.

As you heard these presentations, you probably noticed that they were based on historical examinations of the researchers' own work. So in examining these unexamined lives, the people's lived experiences that we are trying to understand, we need to take a look at our own unexamined lives as researchers, look back at the work we have done, and think about how we can improve it. In the context of where we are in the year 2000, we need to try to improve that work and forge our own directions, and not necessarily wait on a whole field to move us forward.

Garcia Coll mentioned Bronfenbrenner and his theory of concentric circles. Through support from the Maternal and Child Health Bureau, Lamberty's shop, Garcia Coll and several other developmentalists and pediatricians, (i.e., MacAdoo, Jenkins, Crnic), crafted the integrative model of minority children's development that more of us need to look at and think about. That document expands the Bronfenbrenner model by adding circles of racism and oppression, prejudice, and discrimination. It also adds variables like age, gender, and race, which we have come to understand, from a sociopolitical context, as being important in affecting people's lived experiences, within the framework of the development of young children and their families. If we want to understand the importance of context and use it in our science, we need to look at such models as well.

Many researchers feel, as Garcia Coll suggested, that the people we research feel like foreign objects in a foreign place. Even as an African American psychologist who does work on African American Head Start children, I go into their Head Start centers or into their communities, and realize that I do not have all of the answers. I have to rely on the people around me.

So in our methods, we need to ask ourselves, how we can involve the participants in the research that we are doing? How can they help us ask better questions? How can they help us develop better measures? How can they help us be better data collectors?

We also need to think about our inclusion and exclusion criteria for those participants. What happens when we exclude participants because they cannot speak English? What happens to participants, or our understanding of their lives, if we feel like we are not going into neighborhoods because they are unsafe, or we did not get enough money in our research to help teams go into the neighborhoods. We need to understand what we do when we include or exclude, not just on the basis of race, language, or other kinds of contextual factors, but also when we say that there is not any literature on that group. We do not have any preliminary studies on that group. How will we begin to build the knowledge base that helps inform a better science if we do not begin to do that?

We need to think about what it means when we are trying to describe who we are looking at. When we say they were 98% African American, who were the other two percent? When we say they were 60% White, who were the other 40%? We need better ways of knowing and better ways of doing.

With respect to measures, we have heard that we need quantitative measures so that we can be objective, but we also need qualitative information. As Manson has suggested, we need the integration of the two. We need a better science if we are going to be informed by the context.

We need transdisciplinary approaches. We need Garcia Coll as a developmental psychologist to be a cultural anthropologist. We need Manson as a medical anthropologist to put on a developmental psychologist hat. We need Johnson-Powell as a medical doctor to use an anthropological or psychological lens when she is in the field. Furthermore, we need transcultural approaches. We are diverse, but we are one. We are one people, one nation, and we need to understand how we differ and what our commonalities are.

Our procedures sometimes take us elsewhere. We either try to take a standard instrument and translate it and back-translate, or we try to develop a whole new instrument without building on the knowledge base of what makes a good instrument. It is not either/or; there is a continuum.

In terms of the interpretation of findings, even from people of color studying their own people, they are surprised at serendipitous findings. We need to have discussions and think about our work with others as we try to interpret what we are finding.

Focusing on dissemination and knowledge transfer, we need to elevate what is called the "fugitive literature." When people are trying to get descriptive and baseline information, or information on contextual factors, oftentimes one cannot find it in the more widely recognized and respected peer review journals. It is in what has typically been referred to as "fugitive literature": someone's dissertation on their grandmother's shelf or in a journal of Black studies, and so forth.

In terms of interventions, they can be informed by the research that we are doing, but we also need to think about having these interventions be theory-based and culturally appropriate. Context can help inform how we develop these transcultural, transdisciplinary approaches as well. As we design interventions, we need to think about what variables have the potential for change and what variables can be manipulated. We need to understand that taking context into account helps us frame research in meaningful ways.

I would like to say something about training. We cannot expect that students, undergraduate or graduate, are going to move the field forward if we do not, as more senior scientists, support them in that exploration. For the students in the audience, please try to understand that there is a group of people out there who understand that. Try to search them out, and if you do not have an adviser who understands what we have been saying, ask permission to communicate with other faculty about your ideas. It is important to have applied experiences in your programs so that you have the opportunity to better understand people's lived experiences and how you fit in. If you feel frustrated, that feeling is okay. Anxiety is a sign of growth. We also need to think about course work in undergraduate and graduate schools. We do not just need people of color teaching classes on people of color.

Now I would like to address the policymakers. There are policies at various levels. One is the editorial level, and we need to think about special issues of journals, if that is the mechanism. Broadening our editorial boards would enable us to change some of the editorial policies that limit the dissemination of this kind of work.

At the federal level, there are some good examples of how research has driven policy; particularly in the child care and early child care arenas, and particularly Head Start.

Lastly, we need to think about Lamberty's model, and how we need to find funding to do the conceptual thinking. That funding led to an integrative model of ethnic minority children's development, of developing measures on racism and how to look at that, but also to examining strengths and not always the adversity or the problems that disproportionately affect people because of the context in which they live.

Plenary III

Successful Interventions That Support Developmental Transitions

CHAIR: John Hagen
DISCUSSANT: Gayle W. Griffin
PRESENTERS: David Olds, Robert Slavin, Bette Chambers

- **Linking Randomized Trials of Nurse Home Visitation with Effective Program Replications**
  David Olds
- **Curiosity Corner: Comprehensive Reform Goes to Preschool**
  Robert Slavin, Bette Chambers

John Hagen: The title of this plenary is "Successful Interventions That Support Developmental Transitions," and we have chosen as examples two programs that are known to be innovative and to have evidence of their success. The first presenter is Dr. David Olds, who did his graduate work at Cornell University. He is a professor of pediatrics and Director of the Prevention Research Center for Family and Child Health at the University of Colorado Health Sciences Center. The title of his presentation, which is a bit intimidating, is "Linking Randomized Trials of Nurse Home Visitation With Effective Program Replications." From what we have heard in the past several days the issue of what it takes to have a good research design is of primary importance and randomized trials is certainly one of the "good" phrases.

David Olds: I am here to talk about a very early life transition in a program that we have been designing, testing, and refining over the last 23 years. I have two questions: (a) What level of evidence do we need to have in this field before programs ought to be offered up for public investment? and (b) Even if we find programs that show evidence of success or promise as a result of randomized control trials, what will it take to effectively translate those findings into programs and policies that will reproduce the kinds of effects that we find in these scientifically controlled studies? It seems to me that those are fairly fundamental issues that we in the research, clinical, and program communities have to address as we think about how to use science to improve the lives of vulnerable children and families in our society.

For the last 23 years, my colleagues and I have been conducting a series of randomized control trials of a program of prenatal and infancy home visiting by nurses. We focused on women who have had no previous live births, a fairly limited spectrum of low-income families in our society. However, the transition to parenthood is very important in the lives of vulnerable children and families. We serve families for 2½ years, essentially, from pregnancy through the baby's 2nd year of life.

Nurses are charged with three major goals. The first is to help parents improve the outcomes of pregnancy by helping women improve their health-related behaviors, such as cutting down on cigarette smoking, use of alcohol and drugs, and identifying emerging obstetric complications so that those problems can be treated more promptly before health problems start to compromise the growing fetal brain. The second major goal is to help parents improve the child's health and development by helping parents provide more responsible and competent care to the baby in the first 2 years of life. The third major goal is to help parents improve their own economic self-sufficiency in life and personal development by helping them plan future pregnancies, stay in school, or find work.

The major problems that are targeted within these domains, just to emphasize a few, are preterm delivery and low birthweight, the leading causes of infant mortality and morbidity in Western societies. While they are important for the child's subsequent health and development, they are obviously important in and of themselves.

We think neural developmental impairment is another factor that is increasingly considered important during pregnancy and the early years of the child's life in order to increase the child's later life chances. We have become increasingly aware that exposure to toxicants, like tobacco and alcohol, in utero has long lasting effects on the child's capacity for behavioral regulation.

Child abuse and neglect are obviously major problems in our society. The U.S. Advisory Board on Child Abuse and Neglect has called child maltreatment a national emergency. We agree with that. It is important because it is simply wrong, but it also alters the child's life course trajectories in important ways. Child injuries are the leading cause of death among children ages 1 through 14.

Rapid, successive, unintended pregnancies and reduced participation in the workforce are two more factors that conspire to enmesh families in poverty and increase the likelihood that other problems will occur.

When my colleagues and I began this work, we would not even allow ourselves to imagine that what we were doing during pregnancy and the 1st years of the child's life might have long lasting effects on the lives of the children and the families. However, as we conduct longitudinal follow-ups we are seeing that they the interventions have had long-term effects.

Elements of the program model come together early in the life course to reinforce one another. First, to the extent that children have been exposed less to toxicants like alcohol and tobacco, they are going to have better behavior regulation. Babies exposed to those kinds of substances are more jittery, have a harder time regulating their state as newborns, and are harder for parents to care for. So if we can get babies off to a better start by having better prenatal health, it will make the job of parenting much easier.

Secondly, there is a very detailed curriculum that we have developed with visit-by-visit protocols that emphasize the major demands of parenting, and includes helping parents learn how to provide more responsible and competent care for their babies. If we have been successful in helping parents think about their own life course in terms of spacing future pregnancies, it not only helps them stay in school and find work, but have fewer unintended children. Spacing children a little further apart makes it much easier for parents to provide the kind of attention and resources needed to care for their first child.

We have been studying this program in a series of randomized control trials to essentially equalize the groups—in our case when they register during pregnancy, so that any differences that emerge in family functioning and child functioning later on are more likely to be attributed to the effects of the intervention itself.

The first study was conducted in Elmira, New York with a sample of 400 primarily Caucasian families. In the mid 1980s, when the data revealed improved pregnancy and lower child abuse and neglect outcomes, many people encouraged us to promote our program more widely. We took the position that we should not do that because we wanted to be able to say with some confidence that the program could produce results that would apply to the whole spectrum of vulnerable children and families in our society. We had not conducted this study in a major urban area with minorities, so we held off. We chose not to promote the program. In the interim many people chose to use the findings from the Elmira program to promote a whole host of other types of home visiting programs.

We felt that we needed to know if the program produced similar results with African Americans in Memphis, Tennessee and whether the effects would endure. The findings from Memphis were with African Americans where the program itself was conducted through a county health department. More recently we have conducted a third study in Denver with a large sample of Mexican Americans that systematically compares the relative effectiveness of nurse home visitors with lay community home health visitors. We felt that it was important to conduct the third trial because many people had gotten out ahead of the curve on using home visiting programs that use paraprofessionals or people hired from the community to conduct the work.

If one looks carefully at the randomized control trials of those programs, most have failed. So the question is, why have they failed? Is it because the visitors themselves do not have sufficient background and training to deal with the complexities that they encounter in dealing with vulnerable families, or does it have something to do with the programs themselves having been inadequately developed?

We decided that we would address that issue in the Denver study, providing both nurses and lay community home health visitors with the same program model that had been tested, refined, and shown to be effective with nurses in our previous studies. That would allow us to sort out whether it had to do with inadequate program development or with the visitors' limited training and background in conducting this kind of work.

The major findings we observed in Elmira were that women improved their health-related behaviors during pregnancy. There were significant reductions in the rates of preterm deliveries of babies born to women who had been smoking when they registered in a program.

Two features of the program that I failed to emphasize so far are that it also systematically involves fathers and grandmothers and others who are potentially important, in the lives of the mothers, in helping her care effectively for herself and her child. We also systematically linked families with other needed health and human services in the community. We found that women who had received this service had better informal social support and made better use of community services.

During the 2-year period that the program was in operation, among women who had all three of the risk characteristics we use for sample recruitment (i.e., poor, unmarried, teens), there was an 80% treatment vs. control difference in the rates of child abuse and neglect. This figure is taken from state-verified reports of child abuse and neglect. In the 2nd year of the child's life, there was over a 50% reduction in the number of hospital emergency room encounters, especially emergency room encounters for injuries.

Among women who were low-income and unmarried, there was a 33% reduction in the rates of subsequent pregnancy 15 years after the birth of the first child. I have emphasized the fact that these women were low-income and unmarried because in the Elmira study we had a portion of the sample that was not at risk—women who had higher incomes and were married. There were virtually few beneficial effects for that better-functioning segment of the sample. It is important to keep that in mind that families with fewer risks are not as likely to need this kind of service as the families experiencing the stress of poverty. The families in poverty have the added difficulties of trying to care for one's self or one's baby without the support of a partner, and so forth. This is fairly consistent throughout all of our studies.

Over that 15-year period, there was a 2½-year treatment control difference in their use of welfare. By the time the first child was 15 years of age, there was a 44% reduction in the number of behavior problems due to the mother's use of drugs and alcohol and a 70% reduction on the part of the mothers in their own arrests.

How could that happen? How could what happens during pregnancy have an effect on arrests and drug involvement 15 years later? It has to do with the fact that we were able to start serving mothers and their families at a critical life transition. They were making decisions for themselves. Many of the young mothers were making decisions about whether they were going to continue relationships with men in their lives who may have been involved with drugs or criminal activities. The important point is that we know from epidemiological evidence that one of the major vectors through which women themselves get involved with drugs or criminal activities is through men who are involved in those kinds of activities.

The extent to which women make wise choices for themselves and their children at this critical life transition can have profound effects on their own life course trajectories. It also can be reflected in socially important outcomes, such as behavioral problems due to the mother's own drugs and alcohol use, or their own involvement with the criminal justice system. We also see over this 15-year period that there is an enduring 80% treatment vs. control difference in the number of state-verified reports of child abuse and neglect for this low-income, unmarried group.

When we turn our attention to the children, we see that children born into these high-risk families, that is, where the mothers are low-income and unmarried, have over 50% reduction in rates of arrests by age 15. That means that they have become involved in antisocial behavior to such a significant degree that they have been arrested or convicted. This reflects about a 70% reduction in convictions from initial crimes, convictions, or probation violations by the time they are 15 years old.

This reflects the impact of the program on early onset conduct disorder. It is that form of conduct disorder, or antisocial behavior, that has its origins in subtle, neurological impairment and grossly abusive, rejecting care early in the child's life. There is a form of antisocial behavior that emerges with adolescence that is much more prevalent, but probably less serious and less enduring. We think that it is the more serious form that we have affected in this first trial.

When we conduct an economic evaluation of the intervention, based on data from the Rand Corporation's economic evaluation of all the classic early childhood interventions, we see that the cost savings to society and government are four to one over the life course, and that the return on the investment kicks in before the children are 4 years of age. That is because of the significant impact of the program on women's own use of welfare. Many economic benefits are concentrated in reductions in use of welfare. This study was conducted prior to welfare reform so the application of these findings to today's environment is probably limited. Even if we were to wipe out the cost savings due to reductions in welfare use, the program would still have a two to one cost savings.

By the way, when the Rand Corporation conducted an evaluation of the economic impact of our program and the Perry Preschool Program and put them on the same metric, the cost savings ratios were about the same for the two programs.

In the Memphis study we focused exclusively on recruiting women who were low-income and who were virtually all unmarried, because that was the group that had benefited so much in the Elmira study. There we saw significant reductions in the numbers of health care encounters and significant reductions in the numbers of days the children were hospitalized with injuries. Looking at the injury records of these children, one sees that in the control group the injuries are much more serious and that the children are hospitalized at much younger ages than their counterparts. The replicated effects included the rates of subsequent pregnancy. Five years out, in the April issue of *The Journal of the American Medical Association* (JAMA), we reported an increase in the interval between the birth of the first and second child; reductions in families' use of AFDC over the first 5 years of the child's life, reductions in food stamps, and increases in the presence of a biological father in the household. There also were marginally significant increases in the rates of marriage, and among the women who were in partner relationships, partners employed for longer durations.

The third study was conducted in Denver where we compared the nurse visitors with the lay or community home health visitors. In this study, a large portion of the sample is Mexican American. Results indicated that the paraprofessional visitors, when provided the same protocols as the nurses, produce small, clinically significant, but statistically nonsignificant effects on most outcomes. The nurse visitors produce moderate effect sizes that are both clinically and statistically significant.

For example, we see significant reductions in women's use of tobacco during pregnancy, increases in the baby's Apgar scores at delivery, and improvements in the qualities of parental teaching for the nurse-visited families compared with the families visited by paraprofessions. We have developed, with the help of Joanne Robinson, new methods of assessing infants' emotional development and vitality in the first 6 months of life. We see fewer cases of low vitality, and increases in the language development of infants by the time they are 2 years of age, especially for babies born to women who have few psychological resources. We also saw many of the same beneficial effects by age 2 in the maternal life course domain that we had seen in our earlier studies.

Why did the paraprofessionals in the Denver study not produce the kinds of effects that we have seen for nurses? We think it has something to do with the fact that the families value having nurses. During pregnancy and the first few years of life, when you are dealing with families who have had no previous live births, women are scared. They are scared about their own physical health, they are scared about the health and well-being of their babies, and they think that nurses are going to have something more to offer.

We have been conducting some focus groups around the country, and one of the things that families spontaneously tell us is that they value having nurses because they feel they have something to offer to them because of the physical health aspects of the intervention. They are scared of social workers because they are afraid that social workers are going to take their babies away.

When looking at the quality of implementation between the nurses and paraprofessionals, what we see is that the paraprofessionals have completed fewer visits than the nurses and that the families drop out more rapidly in the paraprofessional program. In some sense, that is a reflection of mothers not valuing the paraprofessional visitors as much as they value the nurses. These are facts that I think we have to take into consideration and to give serious thought to as we think about how to most effectively serve this population.

These findings do not apply to all paraprofessional visitors. It does not say anything about working with older children and families. However, when you are dealing with pregnancy, and when you are dealing with those first few weeks and months after delivery of the child, it looks like, from these data, that having nurses is valued more by the families who are offered this service. We need to keep that in mind because at least in home visiting programs, if the families do not value the service, or they do not think it responds to a perceived need on their part, they are not going to show up as frequently. This is reported in an article that we published in the *American Journal of Public Health* in December, 1999.

Even if a program has been shown to be effective in a series of randomized control trials, what will it take to make sure that those essential elements of the program are reproduced in programs that are conducted outside of research settings? This is the issue that we have been struggling with for the last 3 years.

We have learned from past experience that even when you take a program that is based on evidence, it is frequently watered down and compromised in the process of being scaled up. We want to avoid that in the current case. Therefore, recently, with funds from the Robert Wood Johnson Foundation, we have established a national center based at the University of Colorado Health Sciences Center that is devoted to careful, high-quality, programmatic replication of the program in new communities around the country. While in the processes of doing this, we have tried to identify particular domains of work that need to be conducted in order to ensure high quality, programmatic replication.

Another important aspect to look at is the policy context. What are the sources of funds that can be used to support this program? We do not believe that it would make sense for this program to be funded from Washington to the states and local communities. We think that there needs to be a perceived need in the local community and a desire to have the program, if we are going to have high-quality implementation. That means that communities need to find sources of local funds to support the program and that is what has been happening. The program is now in about 150 communities around the country. States and localities have come up with the funds to support their program out of TANF, Medicaid, Maternal and Child Health block grant dollars, and criminal justice funds. They have come to us and said they want the program. We have told them that we think that is great, but they will need to come up with the money to fund it. Fortunately, the economy has been such that they can afford to do that. In addition to helping communities think about funding, we ask them to think about what it will take from the standpoint of other features of the community and organizations that will support the effective replication of the program. We have been very thorough in trying to design effective training and technical assistance to communities and organizations. We have built into the program a clinical and management information system that allows us to continuously monitor the performance of the programs as they are implemented in new communities. Then that information is fed back to communities, so that programs that are experiencing challenges can figure out how to improve their practices.

When we look at communities, we want to know the extent of committed leadership. Is there competence on the part of those individuals to insure that the program will be sustained and supported as it is designed over time? To what extent is the organization going to be friendly to the program itself? Is there committed competent leadership? Is there a visitor-friendly environment within the organization? We try to think systematically about what it will take to make sure that the program is reproduced reliably. We need to think through whether communities have figured out how to sustain the program financially over time. We spend a fair amount of time having staff come to Denver and our staff going to the local communities to provide them with in-depth clinical training in both the content and the methods of the program.

As I indicted before, we have built in an integrated clinical management information system that closely articulates the visit-by-visit protocols that allows us to give clinically useful feedback to the sites about the performance of their site overall, the performance of individual nurses, and so on. Then we ask the question, as part of our ongoing monitoring of the performance of these programs, how are these sites doing? We evaluate them in terms of the standards we ask communities to adhere to from the beginning. In order for us to put our time and effort into helping new communities develop their program, we develop a contract with them at the beginning that states that we will provide the training and technical assistance, the program protocols, and an electronic, soon to be Web-based, management information system, if they in turn will agree to a contract with us to conduct the program in accordance with the essential elements.

That is our general strategy. We will conduct new randomized trials in the future because we think that as this program gets underway in new communities, we will need to test it again. We need to ask if we have been successful in helping new communities conduct the program in accordance with the model. Because the context has changed, we do not know whether it is going to produce the same kinds of results over time.

Hagen: Next, we will hear from Robert Slavin and Bette Chambers. Slavin received his doctorate at Johns Hopkins University. He is Chair of Success for All Foundation and Codirector of the Center for Research on the Education of Students Placed at Risk. Bette Chambers obtained her doctorate at McGill University and is Director of Early Learning at Success for All Foundation.

Robert Slavin: We will be talking today about a new initiative involving a program for 3- and 4-

year-olds who are at risk of school failure. However, before that, I am briefly going to talk about the Success for All program to give you some context. Success for All is a program that we began in 1987 as a means of trying to develop a replicable model that could be used in elementary schools to ensure that children were going to be successful from the beginning of their time in school.

We wanted to start as early as we could and provide high-quality, preschool, kindergarten, and 1st grade through 6th grade programs based on quality, research-based program strategies, extensive professional development for teachers, one-to-one tutoring for children who were having difficulties in learning to read, and an active outreach to parents. Our aim was to involve parents in support of their children's success in school and help schools deal with any problems that go beyond academics, such as irregular attendance, the need for eyeglasses or hearing aids, and homelessness. The idea was to do everything possible to prevent children from getting into difficulty, to monitor their progress carefully, and intervene intensively should the child run into serious difficulty.

The Success for All program began in inner city Baltimore in 1987. A great deal of research has been done on it, comparing the program to matched control groups in many different cities around the country, and in five other countries. We found it to be consistently effective in improving student achievement, in reducing special education placements, and in producing many other positive outcomes. Success for All is being used in about 1500 schools in 38 states. As of next year, it will be used in about 1800 schools with about one million children. We have built an enormous dissemination program after the results of early evaluation showed such promise for the model.

In our original conception of Success for All, the goal was prevention and early intensive intervention. When we first began, preschool was an important aspect in our thinking about what we would need to do if we were going to ensure that every child, regardless of home background or other personal factors, was going to be successful. Clearly, we were going to have to start before kindergarten. But we also were responding to reality, and the reality was that in public school settings, preschools were not that common. While we had a good preschool program starting with age 4, this turned out to be less of a major emphasis than we had originally hoped. Thus, most schools that use Success for All start in kindergarten because the children start in kindergarten in those schools.

A few years ago, this situation changed. New Jersey, as part of a funding equity settlement called the Abbott Decision, resolved that every child in the 30 highest poverty urban districts in New Jersey had a right to a preschool program at ages 3 and 4. We talked with the state about trying to develop a program to help work with the 3- and 4-year- olds who now were going to be in programs in the State of New Jersey. We received funding from them, along with some other funding, enabling us to develop a program that would apply much of what we had learned in the development of Success for All, to developmentally appropriate programming for 3- and 4-year-olds, and the institutions that serve them.

We tried to design a program that would be effective across all different settings: public school, Head Start, and for-profit, taking well-established principles of effective practice from what the best preschool teachers were already doing, and make that the standard for all teachers, by providing training, structure, materials, and so on.

We tried, from what we had learned in our work with Success for All, to develop a program that was not scripted, but very well-specified, with student materials, teachers' manuals, songs, tapes, posters, books, everything necessary to have a high-quality preschool program with the amount of training, on-site follow-up, and structure internal to the program to enable high-quality practices to be used daily—every teacher with every child.

The focus of the program, called Curiosity Corner, is on the whole child and focuses on building cognitive, language, preliteracy, mathematical, personal, and social or behavioral skills in a playful way where children learn through games and creative interactions rather than by sitting and being taught.

Bette Chambers: I brought a bag of goodies. I am going to actually show you what is involved in the program, because it is what is in this bag that makes our program different from many approaches to early childhood education. You will not find anything new here. What we have done is taken parts of models from early childhood education: High Scope, the Creative Curriculum, Montessori, and Bank Street. All of these different approaches have their strengths. We tried to draw upon those strengths to create a sound, developmentally appropriate program. As we go through the data you will see that it is not rocket science. We provide the materials and the training to support the program, with specific detailed instructions for teachers. There is a solid base that they can build on. It does not restrict their creativity, but it lets them build on it.

Our day begins with welcoming the children as they come into the classroom. We make sure that everyone feels that they are part of the classroom community by getting involved right away in activities that they are going to be learning. Then we begin the academic part of the day with Curiosity. He is our cat mascot, and he comes out every day with a bag. In his bag there are clues to the concepts that we are going to teach. Sometimes they are typical concepts learned in preschool, and sometimes they are affective concepts. We talk at length about social and emotional development because we think that that is an important aspect of early childhood.

Curiosity introduces problem-solving activities and often has clues that will stimulate the children's curiosity about what is going to happen during the day. In his bag he has all sorts of goodies. One of them is children's literature. We provide teachers with a wealth of children's literature and activities that will bolster literacy and language development.

The children are experimenters. They have opportunities to problem-solve, experiment, and discover during an extended period of time. They are able to choose their own activities. The program is a bit proscriptive for teachers, but it is constructive for children because children have a lot of choice of activities, but they need to have a large selection of activities available. Therefore, we proscribe clearly the kinds of activities that the teachers should be offering the children.

For example, during our story tree, we give teachers detailed ideas about how to present a story in an effective way so that the children spend a lot of time on higher-level thinking skills. They are asked a lot of predictive and open-ended questions that promote higher levels of analysis, application, and evaluation.

We end the day with a question or a reflection time that we copied from High Scope's review process so that we have some active way for the children to reflect upon what they have learned during the day. Sometimes it may be putting a book together on what they have done, making a graph, or doing some other kind of activity intended to integrate their knowledge.

At the end of each day we also have a home links activity. The home links activity is something that helps children link what they have learned at school with their home environment. It might be finding something in their home or counting the number of wheels that they see on the cars that they pass on their way to school. We suggest concrete ways to make that link.

The home links aspect is important. We try to have parents involved in their children's education as much as possible. At the end of each weekly theme guide is a letter that goes home to the parents. It outlines what the children are going to be learning during the week and how parents can support that learning. For example, it might be a finger play or something that they can learn along with their children.

We encourage schools to make home visits to see how the children live and make the connection with home. We invite the family members into the classroom as much as possible through letters or calls, to encourage their participation. We also send book bags home. The book bags are just that, bags of books, with a story-sharing sheet, and sometimes finger plays or finger puppets, activities for the parents to do, and ideas about how they can share literature with their children in effective ways. We are also developing literacy videos to help parents learn how to read to their children in an effective manner; how to support them by asking predictive and open-ended questions to get the children involved in the story.

We also have an introductory manual used in our initial training of teachers. We have weekly, detailed theme guides. These theme guides are reader-friendly, give a rationale for the objectives, and specify detailed instructions about how to implement the program. The teachers can use it as a base and then add their own creative ideas. It gives them a solid foundation.

Teachers receive support from their Curiosity Corner coach; the person hired by the district or by the Head Start agency. S/he is the person who is in the classroom, helping them understand the materials, monitoring them, and giving them feedback on what they are doing. This person organizes meetings for all of the teachers so that they can share issues that come up and solve problems together.

That person also coordinates the activities of the district or the agency, the Success for All Foundation, and the local trainer. The trainer comes in at least six times during the 1st year to monitor the implementation and to provide feedback to the teachers. She communicates with the coach and offers workshops that are relevant to the particular school and the problems that teachers face in their district. Therefore, there is a great deal of support for teachers to make sure that they implement the program well.

In 1999 we began with a 6-week pilot. This past year was our first full year of implementation. We had 37 classes, all of them in New Jersey. In Newark and Long Branch we began a study comparing the intervention with a matched preschool sample of programs that do not have the intervention. We finished collecting data on 450 3- and 4-year- olds in 36 intervention classes. We used the Peabody Picture Vocabulary Test and the ECERS to measure what was happening in both the experimental and comparison classes.

Hagen: Our discussant is Dr. Gayle Griffin. She attended Chatham College as an undergraduate and received her doctorate from the University of Pittsburgh. Currently she is the principal of the Fort Pitt Elementary School in Pittsburgh where she has been an administrator for the past 21 years. Her school was recently featured in "Partnering For Success" as 1 of 68 sites cited by the Child Care Action Campaign that is doing an excellent job with low-income communities.

Gayle W. Griffin: Before I discuss what we have heard, I would like to share some information about the school where I work. The steel doors of Fort Pitt Elementary School look forbidding, enforcing the building's fortress-like image, but inside a world of color, light, and action opens up, quickly dispelling any thoughts of impenetrability or gloom. Children's work lines the high-ceilinged hallways. The voices of preschoolers emanate from their lively classrooms and 4th graders are building pyramids and boats, and mastering hieroglyphics. Kindergartners and 1st graders are writing, drawing, and constructing tall and stately cities out of blocks.

Fort Pitt declined with the Garfield community's fortunes, and as crime, gang activity, high infant mortality, poverty rates, and illiteracy soared, the school became a symbol of a community under siege. By the late 1980s, with parent disaffection at an all time high, rates of crime and student absence, and very poor achievement levels, the school district moved into high gear to transform the school. Part of that transformation was asking me to take over as principal.

One of the things that I said to them was that the job could not be done alone. During the first year, I immersed myself in the community, in the classrooms, and in the lives of the parents and children.

I had taught at the preschool, elementary, and middle school levels, and I had also been an elementary and kindergarten supervisor for the district. There was clearly a negative attitude in the community about the school, and about its ability to foster children's learning. When I got there, there were seven empty classrooms. Parents did anything and everything to get away from that school. Today, 11 years later, the school serves over 600 children from preschool through 5th grade. We have expanded and identified the third Head Start site within the community. Parents now say that it is a good school and a good place to put their children.

Among the things we did was to take a look at what research told us about success for children. We learned that there were a number of models that focused on community strength. For example, the work of James Comer at Yale gave us a good sense of child development in terms of school and community relations.

We looked at the work of Bank Street College because we felt that our learners were relational and that we needed to have a curriculum that could help teachers build knowledge and a framework for how children learn. We worked with Bank Street College for 3 years with an on-site coaching model. Bank Street staff worked intensely for 2 weeks out of every month with teachers to help them understand curriculum, to interpret child behavior, and to work effectively with children as learners.

We also looked at our organizational pattern, and we felt strongly that we needed to change how we were organized. We decided to "loop" children. That is, children stay with the same teacher for two years. We loop preschool, K-1, grades 2 and 3, and grades 4 and 5. Children know when they come that they are going to stay with the same teacher for that 2-year period. We also use a portfolio-based assessment system. We collect work from children and use it as a basis for assessing progress and growth over time.

We do home visits. We feel it is critical that we have a good relationship with the family. The teachers go into the community, visiting homes and talking with parents about what comforts their child, what their child is like in the home. We get a sense of whether or not there is a preschooler there that we should have in Head Start, and encourage the parent to enroll the child. We bring books and games that we leave in the home. We interact with the parent to begin to engage them in a positive relationship, a partnership between home and school.

We also work very closely with the community. We feel strongly that a community is more than bricks and mortar. A community is people. Over the 11 years working with the community, we have formed a parent-school community council, a 35-member group that works and meets with us monthly to give input on the programs, the budget, and the priorities that we have set for students and families.

We decided that it was important to develop preschool programs as part of the program profile. In many public school districts, serving preschoolers is a serious budget concern because there are no monies to provide for them. Because we became a model site for the city schools, that commitment was made. Our preschool programs had a Head Start base for funding, which includes two classrooms that have half-day programs. This past year we were the first school in the district to open a full-day Head Start program with a private provider, providing wraparound care for child care. With the arrival of the TANF, we found that there have been significant problems with parents who have to work not opting for Head Start because they need all-day programs for their children. We felt strongly that we needed to address that need.

In addition, we felt it was important that we address the needs of preschool children who are medically fragile and who are chronically ill. The children need stimulation. Therefore, we incorporated an inclusion program in the preschool. We take children who have serious medical and developmental needs and integrate them into the community of preschoolers. Children who are blind, hearing-impaired, autistic, and who have other emotional needs and language delays are integrated into our population within the regular classroom. Services are provided: a physical therapist, special education teacher, and others to support their remaining in the classroom and continuing the program.

I want to move now to respond to the previous presenters. We start by observing our world. In moving to a theory, we take those observations and look at patterns of behavior, then develop an intervention or innovation designed to respond to the patterns of behavior we have seen. That is what it is all about: going from idea to practice. In reality, we need practice taking the theories, ideas, and innovations and seeing that they fit the situation that we are in. Therefore, it becomes important that we take what we have heard about the theory or the innovation, and put it into practice. What we have heard today is that when we think about transitions for children, transitions from the home to the more formal preschool school setting, to elementary programs for 5- to 11-year-olds, we have to understand transition means change, and we have to find ways to manage that change.

David Olds told us about neural developmental impairment that occurs prenatally through age 2. He talked to us about the impact that has on school success. What happens with that child whose brain is developing clearly affects what we do in school. We have to find ways to help children rewire the processing when it is not coming together in ways that it should. We also heard that quality is clearly a critical issue. Olds indicated he had slowed his research to be able to make certain that quality was occurring. They actually compared what was happening with nurses and paraprofessionals to see if the quality was any different. That was a key component of the success they achieved from that research.

As we moved to Robert Slavin and Bette Chambers, where they talked about 3- and 4-year-olds, we heard about the impetus for that program coming from funding inequities that we are seeing. Those occur nationally. We see that in Head Start and in the limitations on those served because we do not have the funds.

We heard about the critical need for high quality. Slavin and Chambers showed us that they provided coaching to teachers. They wanted to make certain of the successful implementation of their program. Thus, staff development is critical. Also, they assessed what was going on in classrooms using the ECERS. When I speak to teachers, I talk about having a prepared environment. It does not occur by chance or luck. It involves being prepared, which means we work at how and what children need, and about the base of knowledge necessary for them to build on and grow.

Therefore, we see some clear patterns of implementations for practice. First, we heard that we must have early childhood programs, and that they must start from the womb. We heard that we cannot do the job in isolation. One of the clear threads running through all three presentations that were described, is the critical need to partner with families. If we think we are going to do it by ourselves, we are kidding ourselves. The children do not grow up in isolation so we cannot expect that we are going to be able to do things for them in isolation.

We also have to find the resources. I heard continually that we need to make certain that what teachers need and what families need are resources. We need to immerse children in literacy. One of the key areas that we focus on is helping children to be literate, literate in mathematics, literate in communications, literate in computers, literate in scientific thinking. All of those areas are a part of literacy.

We also see a pattern of parent involvement. We have to learn to define it in different ways. Typically, we tend to define it as, "If I don't see you in front of me you're not involved." We have to recognize that there are many ways that parents might be involved. For example, Olds talked about mothers making better choices in their lives, very conscious ways that impact their children.

We must have instructional strategies that meet the needs of diverse learners. I work in a school where the community is predominantly African American, and so it is important that I constantly share with my staff their need to respond to what we know are patterns of learning for African American children, and that our responding to that means that we are going to be much more successful with those children.

We also know that we need to manipulate the one variable we have control over, and that is time. I tell my staff all the time that the only thing we control is time. We know we have a set amount of time with these children. We know that we can extend that time through safety net programs, be they summer programs, after-school programs, or before-school programs. If we control nothing else in these children's lives, we can control the time that we are given to work and interact with them.

The bottom line is that these children have to achieve. That is what I am evaluated on and that is what I evaluate my staff on. The 'how' is very important, but we have to get to the "what" also.

Closing Session

Speaker

Edward Zigler

Sterling Professor of Psychology
Director, The Bush Center in Child Development and Social Policy
Yale University

Esther Kresh: At each of these conferences I start my mental list on the very first day of what I would do differently the next time. At each conference my list has gotten shorter and shorter until I have very few things on it now. I think we are at the place where we are pretty happy with the way we put these conferences together so we hope to see you back in two years. I want to thank Faith Lamb-Parker and her staff, John Hagen and his staff, and all of the wonderful people from Ellsworth that made this conference possible.

Now I have the pleasure of introducing Ed Zigler, and guess what? I am not going to introduce him. Ed is a tradition. We have him here because it would not feel like our conferences without Ed addressing the group at one of our final sessions. But to introduce Ed to this group is truly a redundancy that I do not think we need to put Ed through and we do not need to put you through.

Ed Zigler: The philosophic base of these conferences is to build a bridge between policy, theory, knowledge, and practice. Unfortunately, many practitioners and researchers think there is no relationship. I want to start by pointing out just how that relationship builds, and why our knowledge base is so important in determining policy and practice, because if you have the wrong knowledge base, it leads you to do ridiculous things. It takes the right knowledge base to give you some direction in the way of practice.

Let us go back to the beginning of Head Start. People have forgotten this, by and large. I cannot forget it. The very first Head Start program in the United States was either of 6-weeks or 8-weeks duration. Looking back 35 years, any thinker today that I know of would not believe that you could take a child who is coming to that Fort Pitt school that we just heard about, a child that lives in poverty, and change him in some meaningful way in 6 weeks. I did not believe it in 1965.

So why did we do it? The early planners were not stupid by and large. Why were we so optimistic? Why were we convinced that this was going to work? It was because we had a particular theory about child development that was popular at the time. There were two books in the mid-1960s that made a tremendous impression on policy makers and our thinking about the practice of early intervention.

One was a very famous book by Joe McVickers Hunt entitled, *Intelligence and Experience*. Joe was absolutely convinced that a short, small change in the environment of a child would have huge effects on the child's growth trajectory. It was not accidental that the first evaluation of Head Start and early intervention programs was I.Q. change. Did you change the I.Q. or not?

The second book was Benjamin Bloom's *Stability and Change in Human Characteristics*, which told about the great importance of the early years as a critical period. You all remember his nonsensical concept—half the learning of the child is over by the age of 4. We do not know when all the learning is over; how the hell would we know when half of the learning is over! These were both friends of mine and I respect them as thinkers, but they were wrong.

Now I will tell you something else. We have learned something over the years. The program essentially now is a 1-year program, which saddens me, because everything I know tells me that if you want to impact the lives of preschool children you need a 2-year program. It is next to impossible for Head Start to provide a 2-year program anymore. The good news, however, is that over these 35 years we have served 18 million children and their families in Head Start. That is a great accomplishment. For those of us who have been involved, that is our joy. The bad news is we are serving a little over 40% of eligible children, to say nothing of those children equally needy of Head Start right above the poverty line. Do the arithmetic in your heads quickly. I keep hearing about full funding of Head Start. If we keep going at the rate that we are going, we will serve all eligible children in 50 more years.

The other mistake we made, given that over optimism of Joe Hunt, was an exactly wrong view of what development is. That was the inoculation model. Give me a child for a short period of time and I will inoculate him against all the ravages of later deprivation, poverty, poor housing, and poor health care. That is not what human development is all about. Just because you had a good meal today does not mean you do not need one tomorrow.

When children leave Head Start they enter a new stage, and they need another set of environmental nutrients that may be quite different from the first set. When they leave kindergarten and they are in the primary grades, they need another new set. There are new demands made on them, new competencies they must reach. So the way I think about human development is that children go through these stages, and there is no one stage that is magically important. They are all important. You must provide nutrients at each and every stage. This is why we should be realistic about Head Start, and not over promise because if you over promise, you are bound to fail.

Fadeout almost destroyed us. Did anybody really promise to take a child for 1 year—which is Head Start now, not 2 years—and promise to make him perfect till he is 40? That is unrealistic. That is like telling a mother, gee, if you are a terrific parent for 1 year in the life of your child, you do not have to parent anymore. You have done it! For those of you who want to see my formal thinking on this, I spell it out in a book I wrote called, *Head Start and Beyond*.

We are going to see a time when we start thinking about dovetailing programs and working at the transition from one to the next. We need Early Head Start. We need a program that starts in pregnancy and goes up to the age of 3. Then what I would like to see is 2 years of preschool. Even that is not enough. We want to follow children through kindergarten, 1st, 2nd, and 3rd grade. If we had the family and the child for 8 years, then we would begin to get the robust results we are looking for.

Rutter's opening synthesis was brilliant, but remember what he said—there is not going to be a single instance. There is not a short period of time that is going to determine later growth and development. You need a long swatch of time to impact a child as he traverses this complex thing that we call development. So I have for years said Head Start is being held accountable for much too much. That is why people can get away with saying, "Hey, this child does not look so great in the 5th grade. He had Head Start. What happened?" That is why I was delighted in the 1998 Reauthorization because I still like what we, the Planning Committee for Head Start, wrote when we started this. It is a very good statement about what preschool children should get. However, there were so many things in it: health, social services, and so forth, that people lost track of what Head Start intended originally. That was to prepare children for school.

Sargent Shriver said this when we did the 20/20 Report for the National Head Start Association. He reminded us again that the idea was to get these children ready for school. So I am absolutely delighted. We have been let off the hook and are finally being charged by the Congress with what I think we can do.

One year in the life of a child, if done with high quality, can indeed impact school readiness. What happened in 1998 Reauthorization was that Congress, after 35 years, finally said the goal of Head Start is school readiness. The road map for school reform in the United States is in the Educate America Act, which spells out eight goals, and the first goal is children arrive at school ready to learn.

Now, one of the things that has happened has been that this administration under the day-to-day leadership in Head Start of Helen Taylor, has finally gotten to the point where they have constructed performance outcome measures. Those measures in large part are school readiness measures. You can see them in the FACES report, which is available. These are the measures that were used to define what school readiness is.

The FACES effort was a big step forward for Head Start. They obtained 40 random sites and saw how children were doing from pre-to post-Head Start. Unfortunately, they had no comparison group, so you cannot say how much of that change is maturation and how much of it is due to Head Start. But you can compare the scores with other databases and standardization data to see how they look compared to ordinary children that these tests were standardized on.

You should all know by now that Congress has asked, "Does Head Start work?" The reply from the Government Accounting Office was that they did not know. The studies done to date were either so old, or so methodologically nonrigorous, that you could not reach a conclusion.

This shook up Congress. They are held accountable too by their constituencies back home. They then charged Health and Human Services to set up a panel of experts, including Head Start people, practitioners, and heavyweight methodologists, to come together and plan a national impact study to answer the question of whether Head Start works. I was on that committee. The committee delivered its report. We probably will get the answer about whether Head Start works by that study, in about 2006. Of course, Congress has demanded to have it by 2002 and the committee was smart enough to say that that was impossible, because it will be a longitudinal study.

I want to talk about the FACES effort because there is going to be a new effort with 40 more sites. What is important about FACES is that it helps Head Start practitioners, who team up with a local college or university, find out whether their program works by using the FACES measures. Do the children improve? Try to get a comparison group, if you can. The other thing is that accountability is not going to go away over the next 10 or 15 years. There is an Act of Congress that says every single government program has to provide evidence on its efficacy.

Random assignment studies are difficult to do. We did recommend a random assignment study, but one of the things that I suggested to Congress is to use the FACES data as they collect new waves, so it is always current. You could use that assessment system to do quality control at the individual Head Start-site level, and you could also take the amalgamation of the findings across sites and use that as a report to Congress about what has been accomplished in Head Start.

Olivia Golden, Donna Shalala, and Helen Taylor are delighted with the FACES outcomes because the results look so promising. The data show progress on important variables.

I see great promise in the FACES effort to help us assess ourselves and help give outside people some hard data about what Head Start is accomplishing. It is all right not to do terribly well on everything, as long as you improve. Programs are not stationary events; they are processes that take place over time. You need a feedback loop to always work on your program to make it better.

Now for a touchy subject that I tend never to avoid: child care in Head Start. This presents a tremendous problem for Head Start. One should not have welfare reform without child care. Back in 1970, we had a welfare reform. It was called the Family Assistance Plan. In that plan, we saw it as a two-generation program. We would get parents to work, like the new program is doing, but we saw the centrality of child care. It was my office, the Office of Child Development, which had the responsibility of providing child care. We started with standards. We costed them out. What would it take to provide good quality care? We took it very seriously. In this last go-around, child care was not even considered. There is nothing that guarantees quality of any kind. All the studies we are getting, the most recent by Lynn Kagan, show that the child care children are receiving in the welfare reform plan through the Child Care and Development Fund is poor. So what we are we doing as a nation, in my estimation, is taking one generation of the poor, the mothers primarily, off the welfare rolls and putting their children in care that is compromising their growth and development, and leaving them to a life that looks very much like their parents'.

Congress had to deal with this question. Their solution was a simple one. Head Start is a half-day program. You cannot get off welfare with a half-day program. So the cry went up in Congress, "We will let Head Start do it." Furthermore, there were people in the Head Start community who said it was simple. Take the half-day, 9-month program, make it an all full-day, full-year program. No sweat. But there is a lot of sweat! In my estimation, that route is a path to the destruction of Head Start. Head Start is not, in its essence, a child care program. Head Start is legislated by Congress as a school readiness program. We will get no credit on the Hill for what we do in the way of providing child care for children. We are going to be held accountable for school readiness.

Think about it for a second. When they tell Head Start, "Do child care," they do not say anything about giving Head Start money to do child care. We keep asking Head Start people to do more, do more, do more. We never give the dollars to the local grantee that will allow them to do everything. Head Start has unfunded mandates. There is nothing wrong with that, but you have to put up the dollars to make it happen. Now, the only possible way that Head Start could have provided what was necessary is to use money allocated for parent involvement. However, it is a two-generation program, and we have great responsibilities, not only for the child. Parents raise children. If you want a functional child you have to have a functional family. We work with parents better than any other program that I know of. We try to be sensitive to the needs of parents. We try to ask what is it they need? What they need with welfare reform is full-day, full-year services. So what to do? The only way we could provide full-day, full-year services is to turn Head Start into a child care program.

It is expensive to go from a half-day, 9-month program to a full-day, full-year program. You would have to water down Head Start so that all it would be is a custodial child care program.

That, in my estimation, is not the way to go. What we have to do is find other money for wraparound programs. Why not take the Child Care and Development Fund and team that money up with Head Start? I have been working with Kennedy and Stevens on their early childhood bill, and we are promising $3 billion shortly. In this bill, the money can be used for the other half-day of Head Start.

One important issue has to do with the quality of Head Start. Throughout the Bush and Reagan Administrations, we saw an expansion of Head Start. However, we also saw fragile centers go under trying to meet the demands of the expansion without the dollars to go with it. Those administrations cared about the percentage of eligible children who were being served, without taking into account the quality of the services being provided.

There are two factors that are going to determine outcomes—the quality of the program and its intensity. We have Arthur Reynolds' data that shows that if you follow Head Start with the same kind of program in the early years of schooling, you have many more effects than you do if you have Head Start alone. That is intensity. But quality is central. During the Clinton administration, Donna Shalala set up a committee called Head Start Quality Improvement and Expansion, a good committee with bipartisan support. What we developed was a template to improve the quality of Head Start, and we made clear our opinion that one should never expand a local program if that program was not of high quality.

What happened to Head Start hurt me deeply in those middle years when I saw it being watered down. David Olds was right. You can have the best performance standards in the world.

You can have the best model in the world. If it is not implemented well, you have nothing. They worked on quality. We see in the FACES report using the ECERS, which is our standard measure of the quality of the preschool site, that they look pretty good now.

In the first 5 years of Head Start there were no performance standards. They finally were issued in 1975. For our parent and child centers there were no standards for over 30 years. Developing and implementing the new program performance standards is another huge step towards guaranteeing quality.

One problem that we must tackle has to do with narrowing the scope of Head Start by putting all the emphasis on literacy, numeracy, and academics in Head Start. I have done 45 years of work with children and I know something about them. We have to never give up the Head Start whole child approach: health, social services to the family, parent involvement. I do not think these people really understand school readiness. Many of you have read my work on motivational, emotional determinants in children's behavior. One school of thought, including people like Bill Damon and others, has argued that it is the motivational personality factors that are more important than the academic factors. I.Q. does not really tell you that much. I.Q. only picks up about 25% of the variance in school performance. Where is the other 75%? Somewhere outside of intelligence, cognition, and academics. So I will continue to fight for something I believe in, which is a whole child approach, part of the original mandate of Head Start.

A final issue is addressing those who want to move Head Start to the Department of Education. What they do not seem to understand is that the Department of Education does not run programs. They block grant programs to the states. There is a school of thought that says it is ridiculous for states to have state programs while the Federal Government has a program that bypasses the states'. Their argument, which is rational, is that they will combine it with state preschool dollars and have a more coherent, rational program.

I have done an analysis of the state programs. They are not as good as Head Start. I personally do not care who runs Head Start. What I do care about is what the quality of the program that is being delivered is like. I am convinced at this point in time, from my own analysis that was published in *The American Psychologist*, entitled, "Will Fifty Cooks Spoil The Broth." They will not successfully implement the Head Start that we created or that we think is effective.

President Carter tried to move Head Start to the Department of Education. We rallied, pointed out what would happen to Head Start. No schools do the kind of parent involvement Head Start does. Nor do they have the comprehensive services that Head Start provides. We informed Congress of this. The vote against moving it to the Department of Education in the Carter years was 14 to nothing. We are going to probably have to fight that fight once again.

But Head Start people are very good at fighting and we now have an important force in the National Head Start Association. They have become very effective lobbyists for Head Start, and I admire what they do. They are our first line of defense. Those are the two issues that we have to watch over the next few years. I will see you all back here in 2 years from now!

SYMPOSIA

Head Start Research and Practice

POSTER SYMPOSIUM

Child and Family Mental Health: Practice and Research in Five Early Head Start Programs

CHAIR: Mark Spellmann
DISCUSSANTS: Kathryn E. Barnard, Robert N. Emde
PRESENTERS: Mark Spellman, Lori Roggman, Jean M. Ispa, Susan G. Pickrel, Rachel F. Schiffman

■ Mental Health Issues in Families with Young Children: Research and Practice in an Early Head Start Context

Mark Spellmann, Catherine Tamis LeMonda, Barbara Greenstein

Empirical findings from New York University's evaluation research of the Educational Alliance's Early Head Start program, in New York City were presented. Our research questions were:

1. Are measures of maternal mental health related to mother-child relationship behaviors when children are six months old?
2. To what degree are different aspects of maternal mental health—depression, PTSD, social support, exposure to violence, and empathy—related?

Findings were based on a sample of 150 families, which comprise the EHS families and control group families in the study.

Sample Characteristics

Baby's father helps take care of baby	46%
Grandmother helps take care of baby	52%
Grandfather helps take care of baby	15%
Great grandmother helps take care of baby	15%
Mother's sister helps take care of baby	12%
Mother's aunt helps take care of baby	12%
Mother born outside USA	21%
Mothers born outside USA	46%
Age: 14 - 16	22%
Age: 16 - 19	20%
Age: 20 - 33	58%
Married (8%) / Living with partner (16%)	26%
Currently in school	60%
Currently working	14%

Have held full-, or part-, time job	60%
Welfare/TANF	42%
WIC / Food stamps	63%
Medicaid	77%

Scales and constructs measured in the study included:

Symptoms of Depression: CES-D, alpha = .89

Symptoms of Posttraumatic Stress Disorder: Impact of Events Scale (IES) –Flooding Symptoms, alpha = .84

Empathy: Merhabian Empathy Scale, alpha = .73

Emotional Social Support: Vaux Social Support Record

Domestic Violence Checklist

Community Violence Checklist

Videotape Rating Systems: Mahoney, Meadow-Orlans

Results

The following tables show a pattern of association between mental health variables and mother-child interaction.

Table 1.
Correlations between Maternal Mental Health Measures and Mother-Infant Interaction Ratings: Maternal Dimensions

	Depression Sx	PTSD Sx	Emotional Social Support	Domestic Violence	Community Violence	Violence Witnessed	Empathy
Maternal positive touch							.42**
Maternal positive verbal			.34*				
Maternal positive affect							.30*
Maternal responsiveness							.32*
Maternal achievement orientation			.41**				
Maternal flexibility		-.40**		-.27*	-.34*		
Maternal emotional attunement						-.25^{t}	
Maternal consistency					-.32*		
Maternal negative verbal	-.35*	-.27^{t}					-.30*
Maternal intrusiveness		.36*			.33*		-.30*
Maternal negative touch							-.50***
Maternal teasing				.24^{t}	.41***		

$^{*}p \leq .05$ $^{**}p < .01$ $^{***}p < .001$

Table 2.
Correlations between Maternal Mental Health Measures and Mother-Infant Interaction Ratings: Child Dimensions

	Depression Sx	PTSD Sx	Emotional Social Support	Domestic Violence	Community Violence	Violence Witnessed	Empathy
Child positive affect	-.27^{t}						
Child communica-tion style	-.36**			-.34**			
Child persistence				-.34**			
Child negative affect				.42***	.31*		
Child emotional regulation			.37**				
Child consistency				-.35**	-.34*		
Child negative touch			-.58***	.68***	.72***		
Child involvement with toys						-.34*	

$^{*}p \le .05$ $^{**}p < .01$ $^{***}p < .001$

Conclusions

Dimensions of maternal mental health—including depression, posttraumatic stress disorder, social support, empathy victimization by domestic and community violence, exposure to community violence—yield medium to large associations with key mother-child relationship behaviors. Optimal mother-child relationships for many EHS families will be achieved only if families' mental health needs are addressed.

Home Visits and Parents' Mental Health

Lori A. Roggman, Lisa A. Newland, Gina A. Cook

The success of home visiting programs depends upon the quality of the relationships established between staff and parents (Roggman, Boyce, Cook, Jump, in press). If the relationship between the home visitor and the parent is distant or tense, if the parent is depressed or withdrawn, or if the staff member is intrusive or ineffective, then the success of home visits will be limited. Some parents may have mental health problems that limit their ability to form positive relationships. Parents who are depressed or do not feel mastery over their lives may have difficulty responding to a home visitor.

Mothers participating in a home-based Early Head Start program were interviewed as well as their home visitors. Maternal interviews included standardized measures of depression (CES-D; Radloff, 1977) and mastery (Pearlin Mastery Scale; Pearlin & Schooler, 1978). Six months later, mothers' were interviewed about the home visits and their relationships with home visitors. After 2 years of program services, home visitors were asked about their relationships with parents and about family functioning and improvement in various areas (e.g., physical and mental health, self-sufficiency, parent-infant relationship, etc.).

Mothers rated as more healthy reported that home visits involve "working together." Although mothers' self-reports of depression and less control were unrelated to perceptions of home visits, they were related to home visitor ratings of mothers as more improved in parent-infant relationships 2 years later. Mothers' perception of home visits as individualized was related to home visitors ratings of positive relationships with both parents, quality of home visits, responsiveness of parents, and improvement in parent knowledge and promotion of infant development. Mothers' perception of home visitors as knowledgeable about infants was related to home visitor ratings of improvement in parent-infant relationships, in parental support of infant play, and in promotion of infant development. Nevertheless, mothers' perception of home visits as "helping make my baby feel secure" was related to ratings of low family social support, suggesting that those who need more social support may perceive home visits as providing more support. Perception of home visitors as knowledgeable about community resources was related to ratings of less family self-sufficiency, lower current parent knowledge, and less parent promotion of infant development. Thus the mental health of parents may play a complex role in the success of early intervention. Family strengths and needs are both reflected in parents' perceptions of home visits, with more positive perceptions by parents who have improved more, also by those who still need more help. Further exploration of data from these families and staff are likely to clarify the ways in which effective home visits can help families establish positive relationships with their infants, learn about and promote infant development, and increase self-sufficiency.

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■ A Qualitative Look at How Mental Health Issues are Associated With Young First-Time Mothers' Relationships With Their Children and Their Early Head Start Home Visitors

Mark A. Fine, Jean Ispa, Elizabeth Sharp, Sheila Brookes, Kathy R. Thornburg

How are mental health issues, particularly personality factors such as alienation and worry-proneness, and the tension between desiring autonomy and needing to be dependent/interdependent, related to young mothers' relationships with their children and their EHS home visitors? Two case studies illustrated our emerging understanding of the impact of these intrapersonal factors.

In Xenia, we see a mother who is planful, determined and hard-working, yet depressed, stress-prone, and alienated. She will put forth the efforts she expects should result in benefits for herself and her child. She is also acutely alert to signs of perceived injustice. For example, when the child care benefits she expected from her involvement in Early Head Start parent meetings were not forthcoming, she discontinued her attendance at the meetings and dismissed the worth of the whole program. While clear and realistic messages about program resources and the benefits of participation are important for everyone, they are particularly important for mothers who are very sensitive to indications of system unfairness.

In Regina we see an adolescent mother who was herself never mothered and who experiences great tension between her desires for a free adolescence and her love for and sense of obligation to care for her young son. She has also shown that she feels at a loss as to how to manage many basic life tasks; her desire for independence is mixed with a clear desire for someone to hold her hand and arrange for the resources she needs. Contributing to these tensions are self-esteem issues and a lack of consistent goals. Her Early Head Start home visitor took on a role that had some features of a mother-substitute. While this role had beneficial results for a while, it may have fostered too much dependence so that the loss of this relationship, when Regina's child aged out of the program, was too great. At this point, Regina asked a relative to take custody of her child. This case study illustrates the need for mental health training for Early Head Start staff so that they can recognize when mothers need referrals for counseling. It also raises concern about "mothering" young clients.

■ Infant Mental Health and Early Head Start

Rachel F. Schiffman, Marshelle R. Hawver

Infant mental health refers to the optimal development and well being of infants in the context of their family with the infant viewed as an interactive member of the parent/child dyad. Much of the intervention done by Infant Mental Health Specialists is helping families and caregivers deal with physical, social, and psychological issues that may impede the development of healthy relationships between the caregiver/family and the child. While Infant Mental Health Specialists work with infants and families together, Specialists advocate for the infant by "speaking" for the infant to the caregiver. The Specialists provide developmental guidance for the parent, articulating the capacities of the infant and interpreting the infant's cues to the caregiver. As the child grows older, parents are guided to listen to the child. This is frequently done by videotaping the caregiver and child and reviewing the tape with the caregiver, pointing out specific instances when the child is communicating with the caregiver. Two cases were presented via videotapes to demonstrate the model.

The Early Head Start program at the Community Action Agency in Jackson, Michigan is a home visit program based on the Infant Mental Health model. The specialists work intensively with families in weekly home visits supplemented by varied group activities. In addition, this Early Head Start Program is participating in the national evaluation of Early Head Start. This provides an opportunity to view the Infant Mental Health model through a different lens, that of an aggregate of at-risk, low-income children. There were 91 children enrolled in the program arm of the evaluation. Mothers were on average 22.6 years of age (*SD* = 4.7) and their infants were on average

5.4 months of age (*SD* = 3.9). Measures used were the child scales (Clarity of Cues and Responsiveness to Caregiver) of the Nursing Child Assessment Teaching Scale (Sumner & Spietz, 1994) and the parent's perception of the child's temperament (EASI) (Buss & Plomin, 1975, 1984). Trained data collectors observed parent and child interaction during a home visit done at or near the time of enrollment. As children began the Early Head Start Program, their cues were clear, they were generally responsive to their parents, and they were described as sociable by their parents. Those few infants who had low interaction scores tended to be very young infants (≤ 3 months) who may not have developed some of the social responses measured by the scale. Children of mothers with lower educational levels scored lower than their more educated counterparts on Responsiveness to Caregiver. The children in the Early Head start program provided the EHS specialists/home visitors with ample opportunities to "speak" for them as they engaged in interactions. Special attention may need to be given to families with very young infants and to mothers with low levels of education in order to enhance their interactions. These families will be followed to explore parent-child interaction as the children age.

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This research was supported by grant # 90YF0010, *Pathways Project: Research into Directions for Family Health and Service Use,* from the Administration on Children, Youth, and Families, Department of Health and Human Services, Rachel F. Schiffman, Ph.D., R.N., Principal Investigator, Michigan State University. It was also supported by grant # 90YC0026 awarded to the Community Action Agency, Jackson, Michigan from the Administration on Children, Youth, and Families, Head Start Bureau.

DISCUSSION

Remarks by Robert Emde summarized by Mark Spellmann

Robert Emde offered summary commentary on the Early Head Start Mental Health Poster Presentation. Emde spoke forcefully about the Head Start community's "phobic avoidance" of mental health problems.

Emde addressed Spellmann's observation that some members of our community believe a strong mental health orientation is incompatible with a strength-based program philosophy. While it does not seem that a strength-based approach must inevitably conflict with a strong mental health focus, several case examples were presented in which this tension had led to the rejection of a mental health focus in Early Head Start programs. Emde asserted that this rejection of directly addressing mental health problems is primarily due to our fears about confronting psychopathology. We wish the issue away because it is threatening. He urged use to confront our fears of addressing mental health problems.

Emde took note of data from the NYU presentation which revealed over half of the research sample (EHS program and control group families) had CES-D scores above the norm (16) for depression. He stated that this finding is typical of Head Start eligible families, and that we will not serve families well if we do not address these dismayingly high levels of emotional distress. Violence and substance abuse are other major problems that we must confront if we are going to address family's problems in a holistic manner. Indeed, NYU research findings demonstrated the pervasive negative effect of community and domestic violence, as well as depression and posttraumatic stress disorder, on mother-child relationships.

Emde proposed that we must use the appropriate professional language in communication about mental health issues. Key to that approach is using the new DSM (Diagnostic Manual) for young children. Some participants expressed nervousness about labeling people. While sensitive to issues of stigma and stereotyping, Emde was firm in his assertion that the appropriate clinical nomenclature is the best medium for communication in the field regarding mental health problems.

Emde concluded his remarks by urging the Head Start community to rededicate its energies to confront the serious and extensive mental health problems of the families we serve.

POSTER SYMPOSIUM
Findings from ACYF/Head Start-University Partnership Grants: 1996 Cohort

CHAIR: Esther Kresh

PRESENTERS: Virginia Rauh, Faith Lamb-Parker, Howard Andrews, Richard Gonzales, Laura Hubbs-Tait, Anne McDonald Culp, Rex E. Culp, Stacey A. Storch, John Fantuzzo, Barbara F. Hale

Five Head Start-University Partnership grantees presented findings from their longitudinal research in a poster format, followed by a discussion exploring implications for practice and policy.

POSTERS

■ Community Influences on the Elementary School Performance of Head Start Children, *Columbia University*

Virginia Rauh, Faith Lamb-Parker, Howard Andrews, Richard Gonzales

The environment in which children are raised has profound ongoing effects on cognitive and behavioral development, yet evaluations of early intervention program success rarely take social context into consideration when assessing child outcomes. This study was undertaken to explore the impact of community conditions on the second grade performance of a cohort of inner-city children who had participated in Head Start. In order to obtain unbiased estimates of effect, we controlled for demographic and biomedical risk factors that are known to influence school performance. The multilevel design required a large urban Head Start population with variation in communities of residence, access to birth certificate and U.S. Census data, documentation of Head Start participation, geographical coding of Head Start programs and children's residences, availability of standardized elementary school test scores, and the ability to match primary and secondary data from all sources.

We aimed to: (a) quantify the contribution of medical factors and family characteristics at the time of birth to the second grade school performance of Head Start children; and (b) explore the independent impact of community conditions on early school performance of Head Start children, above and beyond the effects of individual medical and family characteristics. To accomplish these specific aims, the Mailman School of Public Health at Columbia University formed a partnership with the New York City Agency for Children's Services/Head Start and laid the groundwork for a collaborative process of planning, data collection, analysis, and dissemination of findings.

The partnership team collected primary documentation for 12,839 children enrolled in Head Start between 1991 and 1994. New York City public school standardized test scores were obtained for 6,707 of these Head Start children. New York City birth certificate data and standardized test scores (complete primary and secondary data) were matched for 3,518 of these Head Start children. The final sample, therefore, consisted of 3,518 children who were born in New York City (according to available birth certificate data), participated in Head Start during their preschool years (as documented by Head Start center records), and subsequently attended New York City public schools (according to available second grade scores on standardized math and reading tests).

Biomedical and sociodemographic factors assessed at birth accounted for a significant portion of the variability in second grade reading scores among Head Start children, such that for each individual risk factor, there was a significant *drop* in reading percentile as follows: twin (7%), male (5%), unmarried mother (6.4%), low maternal education (7% for each 5 years of education), and high parity (1.3% for each additional child). Furthermore, the impact of individual biomedical risk factors was cumulative, such that the higher the number of risk factors, the lower the reading scores. For example, the child of an unmarried mother with an eighth grade education with two siblings will have a reading percentile 15% lower than an only child of a married high school graduate. A factor analysis of community-level variables yielded two key factors: socioeconomic disadvantage (percentage below the poverty line, percentage of unemployed males, percentage of single-parent families, percentage without high school degree, and percentage of nonprofessionals in the labor force), and immigration status (percentage of foreign-born populations) that was protective.

Regression analysis of the contribution of community-level factors (socioeconomic disadvantage and immigration status) to reading scores, after controlling for the individual risk factors (parity, unmarried mother, low maternal education, male sex, and multiple gestation), showed that both factors had significant independent contributions to reading scores, over and above individual risk. Moreover, we found that community poverty conditions had a significant impact on reading scores, after adjusting for the effects of individual risks. After controlling for all biological and demographic risks, there was a drop of 4% in reading percentile for each 30% change in the proportion of families in the community living below the poverty line. This finding held for each racial/ethnic group (African American and Hispanics) and for both males and females who attended New York City Head Start programs. Community poverty was actually a stronger predictor of school test performance than individual family poverty.

Results showed a great deal of variability in the level of family and medical risk at the time of birth among Head Start children, despite their relatively low-income status. Medical and sociodemographic risks at the time of birth were major determinants of second grade reading performance among New York City public school children who had participated in Head Start. Although not all Head Start children were at high individual risk, those who entered the world with a high number of risk factors continued to bear the consequences into the early school years.

We also found that community conditions had a significant added impact on reading performance, after taking into consideration the effects of birth factors. This demonstrates that the current environment in which children live confers additional risk or protection, so that the school outcomes of Head Start children cannot be evaluated without taking into consideration their residential context. Plans are now underway to explore how neighborhoods (including variations in schools and Head Start programs themselves) overcome or exacerbate biological risk.

■ Moderation, Mediation, and Predictive Utility: Projecting Children's Cognitive Abilities from Head Start through Kindergarten, *Oklahoma State University*

Laura Hubbs-Tait, Anne McDonald Culp, Rex E. Culp

We examined relations of maternal cognitive distancing, emotional support, and intrusive behavior to children's cognitive abilities 1 year later. Three studies have reported inconsistent findings about how cognitive stimulation and emotional support influence children's cognition. None has examined how parental cognitive stimulation and intrusive behavior might offset each other's effects. Furthermore, in contrast to other studies (e.g., Barocas et al., 1991), Fagot and Gauvain (1997) found that parental emotional support during guidance of problem solving was inversely related to children's later cognitive abilities. Such discrepant results could be resolved if parental cognitive stimulation during problem solving moderated the relationship between parental emotional support and children's cognition.

Two perspectives inform the literature on parental emotional support and children's cognition. One emphasizes the importance of general emotional support (e.g., Culp, Hubbs-Tait, Culp, & Starost, in press); the other, based on Vygotsky's perspective (e.g., Fagot & Gauvain, 1997), emphasizes the importance of emotional support during parental guidance of problem solving. No research has examined whether emotional support during guidance of problem solving explains unique variance in children's cognitive performance beyond that explained by other types of parental emotional support.

The current study tested the moderation hypothesis, examined the predictive utility of parental cognitive distancing and emotional support, examined the predictive utility of cognitive distancing and intrusive behavior, and compared emotional support during guidance of problem solving to other measures of emotional support.

During Head Start, mothers (108 mothers and 2 grandmothers with custody) completed three instruments with subscales measuring emotional support: the Adult-Adolescent Parenting Inventory (Bavolek, 1984; endorsement of appropriate comforting), the Aggression Questionnaire (Buss & Perry, 1992; reverse coded hostility subscale), and a computerized assessment of parenting adapted from Holden and Ritchie (1991) with three dilemmas about child distress each followed by the question, "How likely would you be to hug your child?" The fourth measure of emotional support, positive feedback, was one of six behaviors coded from 4 minutes of videotaped mother-child problem solving (*M kappa*=.88). Cognitive stimulation was assessed by four levels of cognitive distancing coded from the same videotape (see Sigel, 1982; *M kappa*=.86).

The Peabody Picture Vocabulary Test (PPVT-R; Dunn & Dunn, 1991) assessed children's (62 boys, and 48 girls) receptive vocabulary in Head Start. The McCarthy Scales of Children's Abilities (McCarthy, 1972) assessed kindergarten cognitive abilities.

Analysis of children's scores on the McCarthy revealed three effects: predictive utility, moderation, and mediation. For perceptual scores, cognitive distancing and emotional support (appropriate comforting and positive feedback) were equivalent in predictive utility. Likewise, cognitive distancing and intrusive behavior were equivalent in predictive utility, with cognitive distancing offsetting some of the impact of intrusive behavior. Parental positive feedback explained significant incremental variance in children's perceptual scores beyond other measures of emotional support. Cognitive distancing moderated the relationship between positive feedback and perceptual scores; positive feedback was linearly related to perceptual scores only for children of mothers with higher proportions of statements demanding representational thought. Children's Head Start receptive vocabulary mediated the positive relation of maternal hugging and negative relation of physical restraint to children's verbal scores.

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■ The Role and Structure of Emergent Literacy Skills in Literacy Outcomes of Head Start Children, *State University of New York at Stony Brook*

Stacey A. Storch & Grover J. Whitehurst

Emergent literacy consists of the skills, knowledge, and attitudes that are developmental precursors to reading and writing (Whitehurst & Lonigan, 1998). Emergent literacy appears to consist of two distinct domains, inside-out skills and outside-in skills, which arise from different experiences and are influential at different points in reading acquisition. Inside-out processes are involved in helping a reader to decode units of print into units of sound and units of sound into units of language. The skills needed for such decoding include letter knowledge, phonological awareness, knowledge of letter-sound correspondence, and emergent writing skills (Whitehurst & Lonigan, 1998). Many studies have investigated the link between particular emergent literacy skills and later reading outcomes (e.g., Martlew & Sorsby, 1995; Riley, 1996; Wood & Terrell, 1998). However, little work has been done to compare the relative importance and predictive power of various emergent literacy skills across different ages.

In this study, we explore the role of inside-out emergent literacy skills in the reading outcomes of children from low-income families. Our sample consists of 367 4-year-old Head Start children who have been followed through second grade. The children were pre- and posttested in Head Start and followed up at the end of kindergarten on the Developing Skills Checklist (DSC; CTB, 1990), an extensive battery of standardized emergent literacy tasks. The children were assessed at the end of first and second grade on two reading measures from the Stanford Achievement Test (Psychological Corporation, 1989)—the Word Reading subscale, a test of the ability to match printed words with pictures, and the Reading Comprehension subscale, a test of the ability to extract meaning from and answer questions about pictures and short paragraphs. In addition, the children were assessed on the Word Attack subscale of the Woodcock Reading Mastery Tests-Revised (Woodcock, 1987), a test of the ability to sound out printed pseudowords.

These data are being used to build a structural model of individual differences in academic and literacy outcomes through early elementary school. The domain of inside-out skills appears to consist of three factors: print principles, emergent writing, and linguistic awareness. Inside-out emergent literacy skills, as assessed twice in preschool and once in kindergarten, have a strong and significant influence on reading ability in second grade. While this tripartite model of emergent literacy skills fits the data at the preschool and kindergarten time points equally well, particular emergent literacy tasks appear to be more or less influential at the different ages. Among the findings are:

1. Emergent writing tasks are of greater importance during the preschool period than in kindergarten.
2. Rhyming is an important linguistic awareness task in early preschool, whereas the more complicated tasks of segmenting words and sentences are important in late preschool and kindergarten.
3. Knowledge of letter-sound correspondence is most important in kindergarten.

4. Familiarity with the functions of print is more important at preschool, whereas knowledge of the components of print is more important in kindergarten.

These findings have important implications for curriculum design and intervention with low-income preschoolers.

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■ The Impact of Community and Family Violence on School Readiness Outcomes for Head Start Children: An Investigation of Risk and Resilience, *University of Pennsylvania*

John Fantuzzo, Dante Cicchetti

To enhance Head Start's capacity to protect children from ill effects associated with exposure to community and family violence, partnerships were formed between Head Start and community agencies and between Head Start parents and staff. Inter-community partnerships linked Head Start and relevant City's agency databases. The impact of multiple risk and protective factors on academic success and social adjustment were investigated across time.

(Summary not available at time of publication)

■ School Readiness: Meeting the Challenge Through Health Services in Head Start, *Yale University*

Barbara F. Hale, Carol H. Ripple, Edward Zigler

Since its inception, Head Start has promoted comprehensive school readiness, including ensuring children's health. However, research seldom focuses on Head Start's success in delivering health services. Data on Head Start's role in child health care can be used as a basis for improving service delivery and in future educational policy decision making.

This quasi-experimental investigation was one of a series of three studies on mental and physical health in Head Start, funded by an Administration for Children, Youth and Families/Head Start-University grant awarded to the third author. We compared immunizations, examinations, and screenings among center- (n=69) and home-based (n=35) Head Start children and

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middle-income preschoolers (n=28), based on American Academy of Pediatrics recommendations (1995) and Head Start guidelines. First, we compared health service receipt between Head Start and middle-income children. Second, we compared health service receipt between home- and center-based Head Start children.

After obtaining parental consent, data were collected from children's medical records; scores reflecting frequency and timeliness of services received since birth were calculated for each child. Participants were mostly 4-year-olds; 40% were non-Hispanic White.

ANOVA comparisons suggested that middle-income children received significantly more physical examinations and immunizations than Head Start children. Chi-square comparisons on screening and dental examinations revealed that, except on urine screening, Head Start children had similar or superior levels. Most notably, dental screenings were more frequent in Head Start children. Middle-income children received more frequent immunizations and physical exams. ANOVA comparisons of home- and center-based Head Start children revealed that center-based children received significantly more physical examinations and immunizations. There were no significant differences on screenings and dental examinations (both were at or near 100%).

In summary, Head Start children were more likely to undergo lead, urine, tuberculin, hearing, and vision screenings and to have dental examinations than the middle-income group. Particularly as low-income children are likely to receive inadequate or no dental care (Kenney, Ko, & Ormond, 2000), our findings provide strong evidence that Head Start has succeeded in this important health domain.

Head Start did less well on immunizations and physicals. Clearly, there is room for improvement if the program is to ensure that graduates are ready for school. In addition, although Head Start performance standards call for the same services to be delivered in home-based programs as in center-based programs, we found differences for immunizations and physical examinations. Similar investigations should be performed in Early Head Start, where the home-based model is prevalent.

Limitations of the study include the small groups of children studied from a single Head Start grantee and a single middle-income preschool. Furthermore, the findings could be strengthened by including indices, such as emergency room visits, securing a primary medical provider, subsequent academic achievement, and health beyond preschool.

These findings have implications not only for Head Start but also for other preschool programs. Many state-funded preschool initiatives do not provide strong comprehensive services (Ripple, Gilliam, Chanana, & Zigler, 1999); our results suggest that they are short-changing low-income children when they do not ensure access to health services and may be compromising their school readiness, particularly as compared with higher-income children.

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DISCUSSION

Esther Kresh: We thought we would take a few minutes to give you the governmental history of why we have the Head Start-university partnerships, for those of you that someday might want to apply for this type of ACYF grant.

We started offering Head Start-university partnership grants in 1990. It was an attempt to bring the research and the practitioner communities together. We used Head Start, of course, because that was the program that we ran. At that time almost all of the research that was being conducted in child development was being done in university laboratories. Occasionally a university got together with an individual Head Start program to implement a research project, but there was really no organized program for the research enterprise. Also, there were very few university researchers who were conducting research in the field, where the controlled conditions that one has in a laboratory are suddenly no longer controllable. All of a sudden one is faced with a rude awakening that reality really does get in the way of your beautiful research designs. Furthermore, how do you work with practitioners when basically you come from two different worlds where you speak two different languages? Therefore, by putting out Requests for Proposals that were grounded in a partnership between researchers and Head Start, it was a way of establishing these collaborations.

Since then we have had several funding waves. We have tried to target a few priority areas that we feel are important, and to encourage research in those areas. In the last few years we have focused on Early Head Start in addition to the Head Start-university partnership announcements. In this way we have gotten researchers in the zero to three field involved, those who have never been part of the Head Start community before.

This year our primary areas included literacy, mental health, and infancy. Also, we always have a category called Field Initiated Research. Field Initiated Research included just about any other area of research since Head Start is one of those programs where almost anything fits. However, we insist on one thing: that no matter what you are studying within Head Start, since it is a child development program, ultimately your research must lead to child outcomes, and they must be directly measurable child outcomes. I do not accept parent report by itself or teacher report by itself. I am from the school that feels that those instruments are not as reliable. Therefore, there has to be some direct measure of child development that is included, and we actually put that in the announcement.

This cohort of five programs here represent the second wave that we funded. Their grants were finished in 1999 and they are on a no-cost extension this year. They have been completing their work and we thought their presenting would be a good idea because often when we present the results of the grants they are still works in progress. This group is close to completing their work on these particular grants. Also, they represent five different projects that will give you a flavor of how different studies can take place within one cohort.

I wanted to give you a history of what this grant program was about. The grants are already in for this year and they have been reviewed. We have not made any final decisions about which ones will be funded for this year. We intend to send out next year's announcement for a new cohort of grants early in the year.

John Fantuzzo: One of the points that I hope was evident as you talked with colleagues who were sharing their research was the level of involvement in partnership. The word partnership in these research grants is not just a Hallmark card label. It involves a real and active process.

We are fortunate to have a person on our panel who can speak to the receiver end of that partnership and dialogue with researchers approaching Head Start, Richard Gonzales—Director of the Administration for Children's Services—Head Start in New York. Richard has been in the position of having researchers approach him for many research projects with that city. He has some unique perspectives to share and then we will focus on questions related to how you form these quality relationships that provide the scientific integrity for quality data.

Richard Gonzales: I am not sure that it is such a unique perspective for the people in this audience, but I think that one of the things you have probably heard many times in developing a partnership is that there is a tremendous degree of distrust within Head Start programs toward researchers. It just starts from that base and we need to put that out there. Obviously that distrust starts from cultural differences as well as the question of what large systems are going to do with the results of the research study. Therefore, we have found, time and again, that the most important aspect is building a relationship; recognizing that most people in Head Start have very limited knowledge about research and what it does and what it can do, and many researchers have very limited knowledge about Head Start, or any other service delivery model.

Therefore, in developing partnerships, we talk about setting aside as much time as necessary to build partnerships, to have an advisory group made up of staff and parents and others who ask questions, and not move forward until they really understand all the elements of what the project is planning to do and establish a buy-in from the entire group.

Now, in some ways that is very frustrating because when you as an administrator or researcher understand what you are about to do, you want to get started. You are ready, you want to go, you have limited time on your grant and you want to move ahead. In reality, there were times when we would have meetings and think we had answered all of the questions, then we would come back a month later and have another meeting, and the same questions would be asked from a different angle. There was a tendency to want to just say, "Oh, we do not have time for this, we have got to move ahead." However, what we believe led to the significant success in the project was the fact that we needed to take the time to answer those questions and deal with the real risks that parents and staff saw. We also understand that in reality passive resistance works well as a barrier to effective research. If you do not have the buy-in of the people, then you may have very different results than you anticipated, if you have any results at all.

Therefore, it was important to expose researchers to local Head Start classrooms if they were going to be working with children, or be spending time talking to parents in focus groups, or whatever, so that they have a better understanding of how to conduct the research. At the same time, we began to discuss how information was going to be collected.

The issue of confidentiality was absolutely a major issue, and we spent a lot of time on this. I remember being amazed that this was such a big issue because in our project we were collecting very basic information. All we were collecting were the names of children, birth dates, and some other basic data. I thought this was going to be a simple thing. Once it was explained that we were going to collect the information and code it so that afterwards the names of the children will drop away and we would not be making reference to names anymore we assumed this would no longer be an issue. What I did not realize is there were not many people who believed that. They said, "Look, once I give you the names I do not know what you are going to do with the names or the birth dates or where the information is going to go." So it took us a while to develop trust within the partnership in order to answer questions and to help staff and parents who felt uncomfortable. We thought it was important to have parents in the advisory group; to help them understand that they actually had the ability to say "no" to where the project was going.

If there is the one key element it is that any time we tried to move ahead faster, without checking that people in the group were comfortable with where we were, we were making a mistake. It is important to recognize and to test the temperature of the group, because oftentimes you have different players who are entering the picture at different points in time. You needed to take time to include them and to help them understand what the scope of the project is. So in this partnership I think it was important for us to recognize that we used different language, and we had a different understanding of the same terms, even when we could agree on the words that we were using. Once we developed trust, then we could go a much greater distance.

Audience Question: What was the benefit or payback to the Head Start families for giving that access? What were they finally content with that led them to continue with the project?

Gonzales: I think that is a very important question because in each project the answer is obviously different. I will make a general statement first, and say that it was important for us to be able to explain why we thought the anticipated outcomes would benefit the program. In our particular project we were looking at the impact of community factors on Head Start effectiveness. We were looking at the ways that would affect how children going through Head Start might be differently influenced by where they lived that might result in different reading scores in 2nd grade. Therefore, what we spent a great deal of time talking about was how, once the information was collected, parents could begin to use the results as they talked to legislators, as they talked to their school boards, as we began to develop strategies understanding why resources in certain communities were more important, or why removing certain resources from certain communities were detrimental to the success of the child in school. We felt that we were giving them the opportunity to advocate in a knowledgeable way for services that they had always thought were important. I guess the question always comes down to why are we doing this project? That is the first question that had to be answered. Why are we doing this project? What are we hoping to find? Another important question was, What if we do not find that? That was the other issue. People are afraid to do research in Head Start programs and probably other places because they fear that the research might show the exact opposite of what they are anticipating it to show.

I would like to digress for a moment to a different project. It helped me to learn a lesson. There was a project that was done in New York City that had to do with understanding the involvement of parents in the parent policy council and how that ends up having a positive effect on parents. When they looked at some of the variables they found that parents who were most involved in the policy council were actually more depressed than the parents who were less involved. What we helped parents understand is that when you come up with certain findings there are always more questions to ask and you have to delve deeper to find out what the answers might mean. In this particular case we found that part of the reason had to do with the fact that as the parents found out more information about what they could do and what they could have been doing as parents, as they became more knowledgeable, they became concerned with not having done as good a job as they might have or not having gotten involved in their own self-sufficiency skills as they ought to have. By looking deeper into the results and asking other questions, we were able to delve into that. Although they may have measured on this particular scale as more depressed, they ended up later being glad that they were doing what they were doing, feeling that they were more skilled and knowledgeable. In the end, we were able to look at the question a little differently and come up with a much more meaningful answer.

Now, the reason why I bring this up here is because I think that ultimately we have to prepare people for the fact that regardless of the results, results can be used in ways that are beneficial to programs. When you know something, you can always take steps for continuous quality improvement.

Faith Lamb-Parker: I want to add to that by singing Richard's praises a little bit. There were plenty of Head Start programs in New York City that raised a lot of questions about what was in it for them. The way the central office dealt with that was to give us opportunities for a lot of exposure, to talk to Head Start directors, and the educational and health coordinators, and the parent policy council, let people ask their questions. Richard's office did not require that people participate. So there was a sense that people could volunteer to participate. As more and more people participated, some of the concerns either were shared and addressed or they dropped away. Therefore, we ended up with a very high rate of participation, but it was quite voluntary.

Richard and his staff, Judy Perry and the others, handled it very well. They obviously supported the research partnership but they did not force it down anybody's throats. We had to answer all the hard questions in a lot of group meetings, and the partnership had some very talented people. We had a parent on the team who was chair of the Parent Policy Council, Robert Anthony. In his own words he would translate our message about the project to a lot of

Head Start staff and parents as to exactly why he thought the project was a good idea. I think we were very lucky. It was a real challenge.

Gonzales: In the midst of all of this you are always going to have mixed responses. I did receive a letter from one of my delegate agency directors comparing me to Adolph Hitler because of the way they thought that the information could ultimately get used by city government to take advantage of families and move them further into disadvantage. I had to laugh at it, but it shows the extreme. This person was very serious and emotionally upset by the fact that we were going to do a project that was going to compare birth data risk factors with children going to Head Start, and looking at reading scores and what the implications might be. In any attempt to try to build understanding and partnership you are going to have the whole spectrum of experiences. The important thing is to allow people to voice those concerns and keep coming back and voicing those concerns because if you do not, it goes underground, and then they do whatever they are going to do with those feelings anyhow.

Howard Andrews: Just to sing Richard's praises a little more. When we first started to meet with the directors and to also meet with this group that became the nucleus of the partnership team, there were two pieces of research that had just been published. One came out in the form of a book, *The Bell Curve,* and the other was a report that came out of the New York State Education Office. Both of those in different ways cast the Head Start movement—the whole idea of remedial education or compensatory education— in a very bad light. There was enormous concern among the directors, they were very sophisticated and quite widely read, that what our research would be doing would be feeding the existing negative body of information with respect to Head Start. It is to Richard's credit and also to the credit of the partnership team, which included Head Start parents, that they were able to take that same information and turn it around and say no, what Head Start needs very badly to be doing is its own serious, rigorous research, and that research needs to be done by lots of people, including research that is initiated from within Head Start itself. That involves these partnerships, and that this is an ideal mechanism for looking at Head Start.

Richard's phrase was, people are going to be doing outcomes research on Head Start; it is crazy for us not to be involved in that process and not to be doing it ourselves because we know it better than outsiders who are doing it. That set the tone for those directors meetings. We wound up getting the participation of just about half of all of the active Head Start centers in New York City at the time.

Audience Question: I am wondering, since your funding cycle is finishing and you have established these great collaborations, if you are going to be continuing them in any way by addressing new questions and a research agenda with the Head Start community.

Fantuzzo: Yes. I think that the folks here have made this a vocation, a calling. I can speak for myself, it is just so exciting to be connected with the Head Start community and doing research, and once you have made that kind of connection you are going to find a way. We have to problem-solve. The Head Start Bureau's understanding of research was to stimulate research. Once we have it stimulated we need to have it grow and develop. But again, it is a function of being creative. I know Esther and the Head Start Bureau have been looking to create alliances with the National Institute of Mental Health. We have to figure out other funding strategies and hopefully we will have a wise, sensitive, and informed new administration that will recognize the importance of research.

I remember just recently at a conference at NYU, I heard a very distinguished colleague tell her own personal story.

This distinguished colleague talked about her childhood and indicated that her mother was a nurse and worked extra shifts, was a single parent, and never read to her. Therefore, if she got a questionnaire, "Do you sit at home at night and read with your child?" she would have had to say no. However, when her mother took her shopping, she read her every single label on every single item. So as a little girl, she was reading labels and creating a whole rich literacy dialogue. However, if the forms did not indicate those opportunities as possibilities that reflected her culture, then that parent is going to feel like she is not being included, and her experience will not communicate how she richly helped her child. The assumption is if I say no that means I am not helping my child. Your form does not give me an opportunity to say how I am helping my child. That is why we have to be in dialogue or else we perpetuate that feeling of exclusion and our research is not valid. Their parenting strengths were not included in our research agenda, unwittingly, by handing them a measure that reflected another cultural conflict.

Gonzales: For those of you who are looking to do research in Head Start programs, one of the things we are trying to encourage programs to understand is that they should help establish what the questions are that they want researched. They do not fully understand that because some of them are intimidated by the research process and cannot figure out what to ask. I would encourage researchers, even though you may go in with an idea of what needs to be done or what would be valuable to do, to get involved in a dialogue with the program and try to pick their brains on what else they think might be important or what variation to what you are presenting might be important. Even though programs might initially say, "Oh, that's great," they may walk away and say, "We ain't doing that project; that's ridiculous." So their initial response, because all Head Start programs want to be supportive, may sound cooperative. I do not mean to speak against any of my peers or myself, but sometimes they need to be encouraged to contribute their ideas by your asking, "Why do you think this would be important?" Or, "Do you think we could do it differently?" Or, "What else could we do?" Sometimes I think it would even be helpful if you would help pose the questions and get them thinking, because it is an area where many programs just have not given any thought and they often see it as something external that happens to them as opposed to something that they do in partnership. While they value the partnership, they are not always sure of how to make it a real partnership.

A Discussion of Contemporary Issues in Head Start Research and Evaluation: Comparative Perspectives

CHAIR: Diana T. Slaughter-Defoe

PARTICIPANTS: John W. Fantuzzo, Margaret Beale Spencer, Robert F. Boruch, Lawrence J. Schweinhart, Diana T. Slaughter-Defoe, Vivian Gadsden

Diana Slaughter-Defoe: The purpose of this gathering is to engage in a dialogue about Head Start research and evaluation at a crucial juncture in the history of Project Head Start.

We are at the conclusion of the transition study, and some of the results are being presented here. Presently, there is a research and evaluation project being undertaken by Mathematica and John Love.

There have been increasing demands and concerns by the General Accounting Office for accountability relative to Head Start products and services. In the last 5 to 7 years, there have been societal changes with respect to how eligible groups within the society will be able to participate in the program as well as the potential impact of welfare reform initiatives.

We are anticipating that a national evaluation of Project Head Start will begin in 2001. To date, there are over 3,000 research studies related to Head Start.

It is time to talk about what we know about the research and evaluation process relative to Project Head Start. We hope that the outcome of this session will be to inaugurate regular talks among diverse groups and individuals at this conference.

The second part of my remarks is to describe how we prepared for this symposium. We had the advantage of other models. Margaret Beale Spencer and I participated in a similar session last summer at the American Psychological Association. Questions were presented, and then, as panelists, we had the opportunity to respond to the questions. After the panelists had covered all the questions, the audience participated. I made one modification to that in our format. Initially, the question will be directed toward one of the panelists, and then the other panelists will follow and build upon those comments. Also, we are building on the format started in the *NHSA Dialog*. Finally, in order to prepare for our colleagues' responses to the questions, we shared writings among ourselves. Thus, we had an opportunity to read something of each other's work on these issues, which was absolutely essential.

Lawrence Schweinhart: The first question is: Who are the children and families in Head Start programs today in comparison to those at the beginning of the last 4 decades—1960, 1970, 1980, and 1990.

It is important to stress that there is substantial stability. There are many similarities between children in 1960 and children in the year 2000. Biologically, we are identical. The family structure is still fundamentally the same. I mention that because there are certain aspects of our lives that make us think that things change rapidly. Computers are leading the way. The Internet has arisen. We have seen fundamental changes in the way we communicate with each other. Therefore, I emphasize stability because these changes make us think there is not a great deal of stability.

Within this context, there are two or three differences between the Head Start children of today and those of 1960. One is the rise in single parenthood, particularly children being raised by never-married women. This fundamentally changes family configuration. It has also led to a stronger feminization of poverty than was true in 1960, because single parenthood is fundamentally the major path to poverty, as it exists today. It could be debated that the absolute poverty in this country is not as great as it was in 1960, but the relative poverty is greater. I do not have statistics to back that up, but one could obtain them. By the same token, we have unprecedented wealth in the United States, and we are constantly barraged by materialist messages by advertisements and commercials. Thus, the perception of poverty is probably stronger today. The third point is that crack-cocaine became a plague in poor communities in the 1980s. A great deal of street crime and other crimes were directly attributable to what we call "K-Mart cocaine," the ready access to cocaine on the part of poor people.

The next question is: How does and should knowledge of who we are today and of available technologies inform research and evaluation efforts with Head Start and Head Start eligible populations?

Changes, including maternal employment, have led to the need for adaptation of services. By combining single parenthood with maternal employment, it means that today we have to face the need for full-day programs in a way that we have not before. That is because it affects programs so much that it will eventually affect evaluations of programs. We can no longer talk about part-day programs in a vacuum because there is so much demand for full-day programs.

Home visits, which could be assumed as a part of programs before, have become dangerous. People do not want to engage in them. Generally, working with parents and having parents work with their children has become more problematic than it was in the 1960s, because of competing time demands.

Finally, how can we insure that services and evaluations of those services reach those who would benefit the most? We do not do that right now. What we do in Head Start programs is first come, first served among eligible populations. The question is whether we would ever move to a situation where we actually engaged in active universal outreach and recruitment to the eligible population. Even then, the question is, who does profit the most? Is it the most needy? That is a common, untested assumption. Another assumption is maybe those children who are just barely eligible for Head Start might profit the most. We do not know the answer to that question. Thus, it is difficult to say whether we are reaching the children who can profit the most right now.

Robert Boruch: The last point on the first come, first served basis for the allocation of resources in this setting mirrors an ethic of first come, first served in many settings, including law and criminal justice and legal representation. It is also in employment and training programs and in efforts to reform curriculum in schools, and so forth.

Understanding that political ethic and how to rearrange our public ideologies that stress that seem to be important if one of the objectives is to evaluate these programs in the long term using high-end cooperative randomized trials. Because one cannot rely on that ethic, one has to rely on another ethic to allocate resources.

What do we understand about changing that ethic from first come, first served to lottery approaches in the interest of fairness? It is difficult to find empirical research on how to alter that perspective. That is one of the dimensions that has to be taken into account if we go forward with high-level research in this arena.

John Fantuzzo: This brings up the whole issue of how we, as a research community, look at pipeline issues with respect to Head Start. In a project in Philadelphia, we thought we were going to provide services to physically abused young children. We went to the city and mapped out where the neighborhoods were that had the greatest density of physically abused 4-year-olds, and Head Start was in these communities. We made the assumption that in Head Start there was going to be a disproportionately high number of those children in comparison with other neighborhoods in the city. We found the reverse. The higher the density of maltreatment in an area, the lower the likelihood that those children would be in Head Start. Thus, the deployment of that community-based service in that neighborhood is only a function of understanding what the pipeline is and then what Head Start can do to facilitate the pipeline and make sure the service could actually be delivered to the vulnerable families.

There is an incredibly exciting technology—Geographic Information Systems (GIS)—that is burgeoning. It allows us to map and look at needs in communities and at the relationship between needs and services to help us understand the deployment of services. These communities were so resource poor that when a resource as rich as Head Start came in, everyone flocked to it, and because it was first come, first served, many were blocked from receiving Head Start services.

We need to do better research on pipelines to services. The research community needs to think more about those contexts and who is actually receiving the services. Are the service providers accountable to those in greatest need in those neighborhoods and communities? We need data in order to establish that accountability.

Vivian Gadsden: We need to know more about the nature of vulnerability. I am not sure if we, as researchers, have a sense of how severe the levels of poverty are for different groups of children. Sometimes when we think we are moving closer to the hardest to reach, we find out that there are at least one or two layers beneath that hardest to reach.

This is particularly true when we have looked at young fathers, because they are not even in the census. Thus, the normal places where we would look to identify vulnerable families and children, who are the most vulnerable to hardship or problems, are just not available to us.

The question really should be: How do researchers and service providers and other practitioners who are interested in the development of young children understand communities better and go into those communities to find out where the children are?

Margaret Beale Spencer: The next question follows Vivian Gadsden's point considering vulnerability. How are Head Start research and evaluation studies reckoning with issues of social, cultural, and linguistic diversity within Head Start? It is important to understand the various groups well. For the most part, we still fail in that area.

In fact, there are areas where we are underexploring the diversity within groups, having to do with historical and contextual factors. GIS studies are extremely important in terms of census, but they still represent those groups at the most distal level of the environment. One has to begin conceptualizing context at multiple levels, from the most distal—the census and the GIS studies—to the proximal experiences of children and their families. It is important to understand the more proximal experiences of young children as they develop into adolescents, such as the actual physical character of the neighborhood. What are parents dealing with when making structure and support environments less high risk for children? We know that monitoring matters, especially during adolescence. Monitoring does matter for achieving outcomes. If environments are high risk without people understanding how families respond to the high-risk nature of environments experienced by youngsters, then we do not know which variables to look at.

For example, we are currently looking at adolescents. We asked parents questions concerning their children's early child care experiences. What was the nature of the child care experience from birth to 3 years of age and the type of preschool experience? Our findings indicate that one important behavior adolescents engage in, minority boys in particular, is a swaggering behavior, which may serve one function in the communities with peers who see it as being cool, but may be perceived very differently at school. We also know this bravado expression is linked to negative achievement outcomes in adolescents.

We looked at those youngsters whose parents reported that there was "no sitter" from birth to age 3, which in this case simply means that there is no out-of-family sitter on a full-time basis and that either the mother or grandparent stayed at home with the youngster. When the children are in the home with the parent or grandparent in the first 3 years of life, there are significant differences at adolescence in the expression of bravado-like behavior.

This bravado consists of three themes. One is callousness toward women. Another is the view that violence is manly, and the third is that danger is exciting. This is all traditional adolescent male behavior, independent of culture, class, and so forth. These are data for Year 1 on 6th, 7th, and 8th grade African American males living in a southeastern region. What these data say are that even within a low-resource population, looking at males only, those children whose mothers and grandparents cared for them show significantly lower levels of bravado behavior 10 to 12 years down the line.

That is important; especially given that right now in the State of New Jersey, there is discussion about having grandmothers who are caring for children in the home be certified. Even without certification, we are talking about grandparents that are doing an effective job in helping to inculcate internal controls and in making a difference in children's lives, 10 to 12 years down the line.

This is an example of needing to know your population well enough to have a better idea of what questions to ask because bravado makes a difference in adolescence. However, one may not think about it when focusing on the early years.

Fantuzzo: In Head Start terms, instead of thinking about the roundtable, we should be talking about this as a circle of time. The roundtable was to be an expression of autonomy, justice, and benevolence, where everyone has an opportunity to participate and everyone's participation is equally valid.

The document *Beyond the Blueprint: Directions for Research on Head Start Families* reflected a notion of the fact that we have many communities in Head Start and we have to develop an intelligence to be able to ask the right questions for those different communities. We have a significant amount of work to do.

"Arrogance" comes from the Latin root of rogare, which is to ask. Thus, arrogance is to have the answers without asking the questions. The Blueprint document says that we should find out what the right questions are, otherwise we are unwittingly arrogant.

The flashpoint in terms of the research process comes down to the questionnaires, which are the heart of research. In Philadelphia, when we started distributing questionnaires and were willing to listen to people manifest their many different ways of saying "no" to our questionnaires, we began to learn. When we look at some of our questionnaires, we have much work to do. We have decontextualized frequency checklists. If one thinks about what Margaret Spencer was saying, we have important contexts. Obviously, the behavior of a young child is directly influenced by circumstances. Thus, there is circumstantial understanding in contexts that help us understand.

Global frequency checklists do not capture preschoolers' social skills since most of their social interactions with peers happen in a developmentally salient play context. Thus, why not address the context and talk about what they are doing in that context?

Also, we lack the context for understanding the different meanings, both inside the culture—the pervasive meaning-making—and the meaning for those children and parents. There are a number of people who have inspired us to start thinking about this, how we have to go into different groups and make sure the constructs that we are researching mean the same for the researcher as they mean for the participants. We are not doing that work. When we do that work, we increase validity.

With respect to the interpretation of results, have we established a common purpose, a common language, and a common set of procedures in order to conduct our research? Maybe the common purpose is we have money to spend. I feel the common purpose is having the children at the center of the common purpose. Let us talk about a common language. The common language has to have meaning, and researchers, participants, and practitioners have to share the common meaning-making of that language so there is a real common language. Then, this common purpose and language should translate into a partnership with common procedures that are coconstructed to provide the basis for the knowledge-making that should inform knowledge utilization and intervention.

For 10 years, I have worked on this. I have tested measures and found them to be used disproportionately. For example, the Harter Scale for preschool children was used disproportionately on African American low-income children—70% of its usage across 10 years in the research literature. It was developed and standardized on 95 preschool children from the suburbs in Denver. When we started to look at the data, we found that those measures for low-income, 4-year-old minority children were not valid. However, the measurement process continues.

Thus, the research community may be unwittingly arrogant. We have to learn how to ask the questions. We cannot be arrogant in our formulation of the questions. We have to identify the distinctive groups and then start a conversation towards asking those right questions. If we want to develop meaningful, valid research, we have to establish the common purpose, common language, and common procedures that give us the basis for developing a knowledge-making process.

Boruch: The next question is: What do we know about the best available research strategies for evaluating programs designed to minimize the vulnerabilities of at-risk children and youth? I would like to talk about comparative prospectus, and this business of bravado—to deliberately confuse self-confidence, bravado, and other similarly measured variables. In the United States, if one takes large-scale probability sample surveys that measure the achievement of children in mathematics and science and puts test scores along the vertical axis and the level of the children's self-confidence in their own ability to do mathematics and science and so forth along the horizontal axis, one finds a positive relationship. The braver ones are scoring higher in mathematics and science.

The complication here is if one looks across 40 countries and plots the mean level of achievement in mathematics for those countries on the vertical axis and the mean level of self-confidence of the children on the horizontal axis, there is a negative relation. That is, Singapore knocks the top off the mathematics achievement test scores, but it is at the bottom when one talks about mean level of confidence.

This suggests that it is complicated despite the fact that it looks simple. Also, there are major societal/cultural variables that are influencing phenomenon. It may be the case that within the United States, among subcultures, one could come up with different plots—positive in some cases and negative in others.

Spencer: It is important because the bottom line here is that one has to understand the meaning of expressed confidence for those who hold power. In schools, teachers hold power. It is their responses to the child's expressed confidence, extreme bravado, or, in a sense, modesty, that may be important.

That is the point; these are issues that we do not understand yet. There are probably different cultural assumptions about the expression of confidence, and we have to factor that in. When we look at the data for this country, obviously, they are all collapsed together. Thus, we do not know what the graph would look like within groups in this country. Even if one forgets about ethnicity and breaks it down by gender alone, one would find different processes going on here. It is bad enough in terms of culture. We do not deal with these issues within a group to see how the context responds differentially to the person expressing the confidence or bravado.

For devalued groups such as African American boys, confidence is totally misinterpreted as something else. However, we do not know that. These are issues that we have to explore. These are the questions about proximal context from a cultural perspective at multiple levels that need to be addressed.

Fantuzzo: Let us talk about the Head Start mandate in context. The Blueprint document called for multicultural awareness, multiple measurement methods, and so forth. Now we are in an ecology that is calling for unidimensional outcomes of whether or not Head Start is successful. Head Start has to deal with a unidimensional accountability and cost-effectiveness ecology, because Congress has changed its purpose to school readiness. Now, we are all struggling to determine what is a readiness indicator and to find the one readiness indicator that someone in the Administration is going to buy. That is going to be the one readiness indicator that will do great harm.

Thus, as Head Start struggles to maintain its funding and funding trajectory, we have to struggle to keep the notion that we cannot afford to develop measures that do not have content validity. We cannot develop measures and assume they mean what the researcher thinks they mean. We have to establish the content validity, that is that people are responding to the same questions.

An articulate colleague said her mother never read a book to her growing up. That would indicate that this person did not come from a literacy background. Yet, she said her mother made her read every single label, so her mother was doing literacy training in the supermarket. However, the questionnaire never asks about other experiences; it only asks about reading books in the home.

Tami Toroyan: For the past 7 years, I have been following a group of children that I initially worked with in Head Start. The parents were Puerto Rican and African American. They did not believe that they had anything to contribute to their children's literacy, but that is exactly what they did. It was the only Head Start program that made a special effort to attend to the linguistic issues of the families. I look at what is happening now and wonder about the degree to which individual programs have tried to address issues of diversity, linguistic differences, cultural differences, and culture beyond its use as a code for race.

Individual programs are trying to do that. When we think of school readiness and the literature that would inform the conversation about school readiness, particularly the work around emergent literacy, that is the very work that people are minimizing. That work does address the issue of cultural history, diverse backgrounds, and paying more attention to context. It is a difficult issue to address in the broader arena because one has to consider maintaining the program at a national level and trying to bring in some of the work that the individual programs are doing to try to address the issue of context.

Slaughter-Defoe: The next question is: What do we know about the best available research strategies for evaluating programs to minimize the vulnerabilities of at-risk children and youth?

Schweinhart: There was a semantic differential scale that was developed by Charles Osgood. One of the findings from that was the evaluative dimension; the good versus bad soaked up about 70% of the variance. There must be something common, if not universal, about that finding. That is, the evaluation is deciding what we value and what is good and what is bad. We are going to find this with us for a long time to come.

One could argue that the current demands for accountability are in fact a step in that direction. So, even as we value diversity of all kinds, including diversity of outcomes, we, nonetheless, have to cope with the accountability to make sure that people are getting their money's worth.

To answer this question then, I would like to draw a strong distinction, which is not commonly done, between local evaluation and evaluative research. We frequently jumble the two together and act as if they are not different. It is important to distinguish their purposes, and not insist that one aspire to the other.

A good example is the High Scope Perry Preschool Study. Recently, we talked about Head Start being held to these standards of long-term effects and return on investment. We should let evaluative research be free to find the parameters of what really can be achieved without demanding that every program actually demonstrate that. In fact, what we need to talk about, both with respect to the national evaluation of Head Start and with respect to local evaluations, is a more short-term standard. We need to make sure that programs are basically doing no harm and doing some good for children. There is an important distinction to be made between evaluative research and local evaluations. I would also put the national evaluation in the same category as local evaluations and say that these small sample studies are not what we need for the Head Start program right now. It is great to have those studies, but we do not need to demand that every study do that.

I want to talk about local evaluation. Any evaluation has two big pieces: one is instrumentation and the other is design. One can divide those into many questions that need to be answered.

We are about to embark on a huge social experiment in Head Start. Head Start programs are required, by the current Reauthorization, to do evaluation of program outcomes. This has never been required before. The program monitoring system in Head Start has focused virtually exclusively on program process, and it has worked. People think about Head Start in terms of quality and process and not in terms of outcome.

For instrumentation, there are two points. One is that the technical work group on assessment of program outcomes focus on breadth of content and balance of content. What Congress called for is nonlanguage indicators. Language is incredibly important, but it is not all there is. Head Start is encapsulating those nonlanguage indicators into a comprehensive scheme that focuses on eight different domains and tries to capture the richness of child development. That is critical.

The second point is that we have to be wary of the fact that Head Start is centrally administered even though there is much local variation and diversity. In particular, it is easy to identify instrumentation on the basis of Head Start's proclaimed goals and objectives. That is not what really goes on in programs unless people have fully and operationally embraced those goals and objectives. In fact, they have not.

Let us take phonemic awareness, for example. I do not know if people know what that is, but they certainly will if they do not already. Unless they actually translate it into concrete things that children do and opportunities that are provided, however, it is not going to happen. It is not something one can just talk about, such as the development of self-esteem. No one is going to object to it, but it is going to be operationalized in 50 different ways.

We have to talk about what people are really doing, and we have to do that empirically. We need to find out what they think their goals and objectives are and not just say here are the goals and objectives, because one has to internalize goals and objectives before one actually has them.

The second set of issues has to do with design. There is no question that random assignment is the best approach to finding out the truth, if there is a truth to be found. However, I am coming to the belief that it is extremely difficult, if not impossible, to accomplish random assignment in Head Start as it exists today.

It is going to be interesting to see if the National Impact Study, which is on the table right now, can be accomplished. When we did a pilot study for that, there was a 50% lack of initial compliance with control group membership. That is not attrition; we did not have time for attrition. Some 50% of the folks who we asked to be in the control group said they had better things to do. If one is going to have 50% attrition, one does not have random assignment in any meaningful sense. That is going to be a real issue. We need evaluative research that tries to deal with this.

A second approach would be to have a comparison group. It is possible to the extent that we are still not serving all eligible children, picking up children as they enter kindergarten, and making sure they have the demographic backgrounds. This is promising for researcher-Head Start partnerships, but not so much for the local evaluations that will be required in Head Start. We will be able to accomplish it sometimes, but we cannot make it universal.

The third possibility is a pre-post design. It is the weakest of those designs, but by the same token it is achievable. One can collect data at the beginning of a program and then again at the end of the program. That may be the way we can talk about local evaluations in Head Start.

One point on instrumentation that relates to that is that we have been talking about observational assessment rather than direct assessment of children. Some of the Congressional objectives may almost demand direct assessment of children, such as the ones on vocabulary. What attracts me to observational assessment is that there is less opportunity for harm to come from it. When teachers, in particular, are focused on observing children, it usually has good results, even if they do it poorly. Whereas direct assessment—giving children tests, can mess things up in many different ways.

What is important is that local evaluations will be so widespread that it constitutes a more serious interaction between research and Head Start than in the past. Even though it is not going to always be as scientifically defensible as we would like to see, it is going to bring the thinking about evaluation to Head Start programs throughout the country.

Boruch: It may come as a surprise to some of you, but I plan on advocating the use of randomized experiments. In introducing the idea of randomized trials to new arenas, practitioners and clients may declare them to be illegal, immoral, and not much fun. The problem is to invent incentives and reduce disincentives for insuring that they are legal and perceived to be moral and a bit more fun than people expect them to be.

None of that is easy. In accord with this comparative perspective, over the past 20 years there have been a large number of large-scale, randomized trials in the employment and training arena, including, in particular, the Rockefeller Foundation's support of employment and training programs for minority female, single parents. These were conducted in day care programs, during the period of training, over a 9-month period.

It was clearly the case that, in six of the sites, the fact that individuals would have to be randomly assigned or not to the program created some ethical dilemmas for the practitioners, the service providers, and others. Up to a point, they resisted. Once they learned the program would receive more money if the evidence indicated they succeeded minimally in generating higher employment rates, wage rates, and so forth, this served as an incentive for buying into the experiment. Throwing dollars at the program to actually participate in the experiment also counted heavily toward engaging entities to cooperate with randomized trials.

Certainly, talking to the control group members was difficult. Why should a mother with two children who just learned that she has not been selected in this lottery buy into the trial? There are various culturally related incentives and different disincentive systems. Each of these employment and training centers, including the Wider Opportunities for Women in Washington, the Center for Employment and Training in San José, the Atlanta Urban League and three others, employed different strategies. The people in Atlanta were matriarchal in their perspectives in explaining the fact that cooperating in this research would do everyone much good, including those individuals who were in the control group. They told the women that they would be contributing to the community by participating. Also, the women were paid for participating as control group members. In San José, the perspective was different. It was much less authoritarian and matriarchal but rather more sisterly in its orientation, which accords more with the Latino subculture in the San José area. They took a different approach to explaining randomization.

Rockefeller invested in videotaping everything—how randomization is explained, how to get buy in, and so forth. Those tapes are an invaluable resource for learning how to do this within a new arena, such as the Head Start sites.

The earliest evaluations of the effect of Head Start by Westinghouse Corporation and Ohio State University were negative. That is to say, if one assumes the program is merely useless, we made it appear to look harmful by using conventional matching techniques, conventional econometric models, covariant analyses, and so forth, based on observational not randomized data.

It is the same thing in estimating the relative effectiveness of employment and training programs in some arenas. We know from a randomized experiment that the effect of the employment training programs on adolescent males is zero—that it does not help their wage rates, does not get them back into school, and so forth. Then, one does an analysis of passive observational data that is longitudinal in character using conventional econometric models, and, again, the estimates of effect are negative. This makes the program look harmful, when it is merely useless.

This is a risky proposition. We need to be serious about the experiments and, in parallel with that, learn what the biases are that are implicit in some of the statistical models that we use to estimate, based on observational data.

The January issue of the *British Journal of Medicine* last year carried a marvelous article in which some 80 studies of randomized experiments in parallel with nonrandomized experiments in the clinical medicine arena were evaluated to address the following question: Can we anticipate where the bias is going to be if we do not use a randomized trial? The answer is we have no clue as to what to expect. Sometimes the biases will be positive, at least in the medical sector, sometimes they will be negative, and sometimes they will be zero. Developing a research agenda that advances a kind of calibration or incremental approach to understanding this seems important. One of the only promises for worldwide cooperation in this is the International Campbell Collaboration. The operation uses, as a template, the Cochrane Collaboration, which promotes the accessibility of systematic reviews of the effects of health care interventions. The basic objective of the International Campbell Collaboration is to produce high-end, systematic reviews of studies of the effects of social and educational policies and practices from around the world. The main objective is to identify studies that are related to particular areas, including this one, and to do systematic reviews that are independent of government and private for-profit influences, lobbying groups and so forth, so as to get a better understanding of the extent to which some things are succeeding and some things are not. Some of this is going to involve calibration experiments in which side by side experiments and nonexperiments are compared.

The final point has to do with the fact that in the Head Start context, the difficulty of randomization is terribly important. Instead of designing experiments that estimate the relative effect of Head Start, what about designing experiments that incrementally help to understand how to improve Head Start. By manipulating components, ways that engage parents and teachers can be experimentally varied. Thus, the question becomes not does Head Start work, but rather which variety of Head Start works better in a conscientious way. That is one political and scientifically legitimate approach to advancing understanding in the arena, and we ought to capitalize on it.

Let me end with a quote from Don Campbell. In the old "Reforms as Experiments" paper, Don said, "Where policies are administered through individual client contexts, randomization at the personal level may often be inconspicuously achieved." This has yet to be known for Head Start, "but for most social reforms, larger administrative units will be involved, such as classrooms, schools, cities, counties, or states." Or from the examples in my paper with Ellen Foley, with respect to factories, hospitals, police precinct, police hotspots, and other entities, "We need to develop the political postures and ideologies that make randomization at this level possible for the honestly experimental society."

That leaves another set of options that might be pursued either as part of the future of Head Start or in other ways. There are a number of examples of randomized experiments that use entities, such as factories and schools, as the units of allocation and analysis. They are not terribly visible though, because they come under rubrics like cluster-randomized trials or group-randomized trials. They appear in health-related literature, including health education, far more than they appear in the regular education literature. They appear in the *New England Journal of Medicine* and in journals related to education and health risk in schools, and so forth. Thus, we do not know about them. However, we should know about them for this particular arena and exploit that experience if we want to drive ahead in this area.

Schweinhart: The next question is: What are the essential elements of quality local evaluations, and where are such evaluations best performed, at the state or metropolitan level? Head Start has functioned by adherence to regulation as a mode of operating since the invention of the Program Performance Standards back in the 1970s. Now, we are talking about a new way of functioning, but it is so subtle that it is important to name it for what it is.

The most obvious analog to this is the public schools. The biggest difference is that the public schools have a relatively narrower set of objectives. There are those risks with respect to what is going on in Head Start as well. There are a number of aspects of the political climate moving toward Head Start being a literacy program, not incorporating literacy, but being a literacy program. That type of narrowing of objectives would produce a different kind of Head Start program from the one we have today; this is not a good idea, in my opinion.

In any case, the identification of instrumentation is going to be central to how these things are played out. The overall impulse is captured in the phrase "teach to the test," which is a sound one. That is, in broader terms, to recognize the goals and objectives upon which one is actually going to be assessed and act to achieve those goals and objectives. That is what is not taking place right now, but it needs to take place.

I would like to see a moratorium on summative evaluation in Head Start, as we are alluding to, and have the primary purpose of evaluation for the next years be formative. That is, to provide feedback to improve Head Start and to orient it towards the goals and objectives that are already there on paper but are not necessarily there operationally. Only then would we even ask the questions.

The comparison to kindergarten is also intriguing. No one has done a study of the intrinsic worth of kindergarten, yet kindergarten has become universal in this country. It may well be a better model to follow, so that then the evaluative questions are along the lines of what Robert Boruch is talking about. Using random assignment at the administrative level is a wonderful idea; it is difficult to cope with some of the current second-guessing.

I have been making the comment with respect to the National Impact Study that it requires the willing suspension of belief. Many people believe Head Start works, but politically, right now, they have to question that. The political majority believes that Head Start is a good idea and should be continued, but there are these questions that are being raised at the fringes.

Carol Fitz-Gibbon: Who are the natural partners in these efforts? Lawrence Schweinhart's comment about literacy made me think about partnering conceptually, practically, and methodologically. I want to mention the conceptual and practical partnering.

I agree with Schweinhart's example that Head Start programs becoming literacy programs is too narrow. Part of the problem is the narrow notion of what literacy is, and there may be a more expansive, but also narrow, notion, on the literacy side about what Head Start can do.

We thought of literacy more expansively, as something more than reading and writing, including problem solving. We thought of it as young children developing a number of other skills, most of which are developed in Head Start programs already. Then, in some ways, Head Start programs could well be literacy programs without actually being defined that way, because it would be restrictive. What would it mean for those people who are doing emergent literacy and family literacy and focusing on those various issues in literacy to have something more than a marginal or tangential relationship to Head Start?

Years ago, funding dollars were given to Head Start programs to insert a literacy program. Certainly, in the program where we were and in many of the others, people did not know what to do. Here was an opportunity to deepen existing work, but not enough resources to do what needed to be done. As we think about the ways in which we draw from the various data sets, or construct evaluations, we might think more expansively about the other areas of work.

The other point has to do with the ways in which service providers in programs understand evaluation and evaluative research. I will pull from work that we have been doing in fathering programs. One of the criticisms was that researchers came in all the time knowing nothing about the programs and not bothering to learn anything about them because they thought that would make them more objective.

Of course, Head Start programs do not have quite the same problem. Part of what is happening there is an effort to work more decisively with practitioners to think about what needs to be measured and how to use an evaluation, so that people do not say, "We have had evaluations done every year, but we do not find them useful."

What do people need to do in the construction of their missions, in planning their everyday work, in making selections about the people they hire, and about their relationships within a program, so both the evaluation of the program and the subsequent evaluative research is better informed?

Gadsden: The next questions are: What is the status of Head Start research in relation to studying the favorable impact of the program on families and on educational outcomes? and How are macrosocietal changes, such as recent changes in the nation's welfare system, assisting/thwarting the processes of going to scale, relative to existing programs like Head Start, in providing services to children and families?

There have been several efforts to look at the role of fathers as a part of the family involved in the mandate of Head Start. One limitation we have is a problem about what constitutes family involvement and who constitutes a family. We have a reductionist paradigm because family involvement has come to mean parent involvement and parent has come to mean the mother only. We do not have a broad view of the family. We do not have a sense of what the contributions of individual family members are to children's development in Head Start, nor do we have a sense of the ways in which those families' histories and cultures can begin to define child development, as well as educational outcomes.

The most recent demonstrations have included work around fathers. Certainly, the Early Head Start project has a mandate to do this work. We have no long-term, meaningful two-generational data, to date. We now have a group of people who are slowly moving into grandparenthood that we could study. It would be fascinating to begin to look at the impact of Head Start on both the child in the Head Start program and the parent of that child.

The impact of the participation of the parent in Head Start is one level. What is the degree to which the child's involvement in Head Start and the family's involvement with the child in Head Start influence the parents' own decisions about going back to school and getting a job as well as larger life decisions?

The second facet of a discussion around family involvement has to do with how the changes of Head Start children are sustained over time and what is transferred from one generation of Head Start participants to another.

Perhaps the most salient issue around father involvement focuses on the degree to which the mothers in Head Start will or can provide programs with access to the fathers of the children. This is a logistical, ethical, and moral question, to some degree, for those who are running the Head Start programs. Do the fathers have permission to come to the program? Do they have permission to receive information about the children in the program? Certainly, the fathers of children in public schools typically do not have that kind of access unless they are living in the home with the child.

In that a fairly large number of children in Head Start are in father-absent homes, the problem of father engagement becomes even more difficult. The degree to which a large number of children in Head Start are cared for by their grandmothers, as opposed to either the mother or the father, suggests that this is also an important and critical area to study.

Thus, one person in that child's constellation of family members may not have access to the program, while another family member, such as a grandparent, may be willing to be involved in a more meaningful way. However, there is no framework to gather information about either one of those people. The current frameworks that are being used around family involvement do not capture these issues in any meaningful way.

One way of thinking about who the children and the parents are is what are the cultural histories and what are the ways in which these families make meaning and contribute to children's lives. There are ways that we may not capture. There was one question here about qualitative and quantitative work that may not be captured as well as it could be on traditional quantitative measures. Rather than struggling with whether we should do that, the process should be doing it and figuring out when and how to do it and which of those methodologies might inform the other.

There are many problems around engaging fathers that would not be revealed through traditional methods. For instance, is there a sense that identifying the father would mean a loss of social services in any way? My experience is that people actually group everything, and if there is anything that hints of government support, they really do not want to have much to do with it. Thus, what may appear to be father absence to the average service provider may not actually be that. On a given day, a mother may say that the father is not engaged, but that may or may not be the case a month later, because relationships change rapidly, particularly with young parents.

We have tried to identify that kind of information through surveys or traditional experimental models, but have not been able to capture it. What has happened, however, is when we have gone to do home visits and spent time in longer conversations, somehow these issues manage to reach the surface. It is from there that we can enter into a different discourse about what the family culture is. What are the attitudes and beliefs about childrearing, about development, about education, about schooling, and about the relationships that children should have with various adults? What does each adult contribute to the specific childrearing and cognitive development of the individual child?

Fantuzzo: Vivian Gadsden and I have been critically looking at the parent involvement literature. There are two mandates that are putting Head Start and parents in a dilemma: (a) the welfare reform mandate, which stresses that people must go to work or to school; and (b) the Head Start mandate that a family cannot participate unless the parent is involved in the program.

Head Start needs to draw on the research literature to look at strategies for parent involvement. We criticize that literature in that it is a fairly unidimensional survey literature. People have decontextualized lists of behaviors that parents should be doing, and they check whether or not they do them. There are lots of multidimensional theories, but the actual way of measuring it is simply using surveys.

We are now in a position where we have to say who in the family is connecting and supporting. Thus, we have to look at the "who" that is doing the "what." We know that the culture is the thing that is driving "who" can do "what." Looking at the culture really helps us understand what males can do and what females can do. If Head Start is blind to this, it will lose the "who" to do the "what." The challenge is that one cannot just come up with the "whats." A research endeavor has to identify who is helping the child and who are the significant people and how do we form relationships with them. These are the real protective factors. Thus, how do we become smart about the culture? We can use the culture as motivation and momentum to give a context for the "who" to do more of the "whats" to help children. That is the bottom line.

We have much work to do to define and give more intelligence to those dimensions for Head Start. It is a challenge because with all due institutional narcissism in terms of Head Start, we know the real juice is coming from the home and the family, but we have missed that in our public education. One of the big problems in public education is engagement because we really forget the phenomenal power of the family. We need to connect into those power sources.

Schweinhart: I want to clarify the measurability or observability of engagement, involvement, and the "who." One of the failures in the psychometric literature arena has to do with the extent to which we have, unlike the sociologists of organization, basically ignored a generation of high quality measures of the C-word type—cooperative, collaboration, communication, and so forth. This is despite the fact that those words are part of the slogan of almost every comprehensive school reform effort.

The fact that we know so little about how to observe this in the dynamic, narrative, qualita-

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tive, or numerical sense that represents whatever dynamics are going on out there, is a tragedy. If the only thing that this new wave of Head Start evaluative research or evaluation does is produce better indicators of that engagement at a variety of levels and across institutions—the school, Head Start programs, and so forth—it probably will have justified the money that is being thrown at it.

Spencer: The next question is: How can we design studies that take into account the full range of benefits to Head Start participants, not just the benefits conceptualized from the outset? and What are the reciprocal roles of quantitative and qualitative research in this process? I will respond to the second part of the question first because of the implications of going to scale.

Our university is not unusual in that there is a quantitative-qualitative tension among faculty. It is an unnecessary conflict because in order to carry out good research, we all have to address the issue of where we are in the question-asking process. In other words, do we understand what the question needs to be for the "who" and the many "who" that we are attempting to study?

For locales that have been engaged in this questioning process, and that are open to it, maybe some would be ready to go to scale. I say that because it is qualitative inquiry that should be used to gain an understanding of what the questions should be and how those questions should vary in terms of the construct itself for different groups. For example, we know what bravado looks like in adolescence. If a parent reports that the child's early care experiences included having a parent or grandparent in the home from birth to 3 years of age, then we know that those children will probably look pretty good. If one looks at the type of child care from 3 to 5 years, for example, proprietary day care versus Head Start versus a continuation of in-home care, on something like learning responsibility, and then looks at the adolescent period, one is really talking about the construct, "learning readiness," in the preschool years.

In terms of methodological strategies, even when one is looking at going to scale for a whole developmental domain at different points in the life course, one has to have a sense of what the construct should be and how it should be observed at different points. For example, taking responsibility for learning what one has to do in adolescence. We are suggesting that this is part of learning readiness. Furthermore, what the grandparent or mother does in the home between birth and 3 years, and then what Head Start continues to do when children transition into that context, must also be considered in the construct, "responsibility for learning."

To scale means understanding what constructs look like at different points in the life course. It is important, as one develops a research project, to have all the partners ready to talk to each other and understand that the constructs of interest may look somewhat different at different points in the life course. For example, if one is trying to go to scale and look at what to do with adolescents, one must, at the same time, be thinking about what to do with infants, toddlers, and preschoolers. That is where the pipeline to services comes in. One must be able to think in tandem about what one is doing in terms of adolescents at the same time as one thinks about what one is doing about children from birth to 12 years of age. Ultimately, when thinking about a construct in this way, one will begin to create developmentally appropriate ways to address the issues at each point of the life course.

I mentioned earlier the importance of coming to grips with historical factors, such as the issue of immigration status for Southeast Asian children and what that means in terms of early experience. Coming to understand what that means for that group, and what extra steps have to be taken in response to their particular issues, is important. One must also understand what protective factors are available for them versus another group.

Understanding context and looking at multiple contexts, even in terms of the "who" relative to early child care and looking at multiple informants, is also important. One has to have multiple informants, and how one goes about collecting the information is going to determine what one ends up getting. Gaining the interest of certain types of families as a show of respect is going to make a difference in the results.

My thinking is somewhat different from Lawrence Schweinhart's about the need to give up directly testing young children. Rather, we need to look at children using qualitative methods, such as observation. The important part is having developmentally appropriate measures, understanding what something means from the meaning-making process, and understanding that even well-trained observers, like teachers, may have a different way of evaluating behavior. For example, if one has objective observers as well as teachers rating the same interpersonal play of young children, a teacher may rate a child's rough and tumble play as aggressive, when it may simply be play and not aggression. She may rate the behaviors as aggressive, given some standard that she is using, while from the child's perspective, it is rough and tumble play. Thus, the kind of pre-training in observational methods given to the observers is an important part of how they perceive and evaluate behavior.

These are important issues: considering context, using multiple informants, and being sensitive to different cultures. These are all things that we have to consider and understand at the same time, in addition to the developmental issues that, in theory, drive our concerns. These must be taken into account in order to determine whether or not we are ready to go to scale.

Schweinhart: I would like to talk about tests in a different sense from direct assessment. I came to realize that the word "test" is almost always the way we approach evaluation. We are testing to see whether some model that we have in mind is already there. In particular, I was speaking of employing comparison groups in some way. Perhaps there is another alternative called the anthropological approach. That would be to say let us not test to see whether or not we are fulfilling some model of what Head Start is supposed to be; let us assume that if adults spend some time with children something is going to happen, and we need to find out what it is. Let us not see if children measure up; let us find out what they actually are learning.

Children are clearly learning if they are there having experiences. The experiences presumably are having some kind of an effect on children's development and performance. Let us find out what those effects are.

AUDIENCE QUESTIONS AND COMMENTS

John Hagen: I think back to the plenary session and the comments about context. When we talk about context, do we do it in such a way that we are willing to test it empirically, or do we talk about it in terms of the background and what we think we know about it?

Cynthia Garcia-Coll alluded to a symposium in which she and Larry Steinberg had had some major disagreements. In particular, he gave a talk in which he argued that in looking at all the empirical evidence that is available, especially on parenting of adolescents, the message is clear regardless of social class or ethnicity: It is better to be an authoritative parent in terms of the various outcomes for adolescents than to be an authoritarian or a laissez-faire parent.

People think he is ignoring some of the nuances and things we do know that might vary, and why some children in some situations might be better off with a more authoritarian parent and so forth.

Spencer: That is making an assumption that authoritative parenting means the same thing across groups. In some context, aspects of what Steinberg would term authoritarian parenting would be characterized by the cultural groups in other context situations as authoritative. If one is living in an environment that is high risk on multiple levels, authoritative parenting would have to include some authoritarian aspects, if one wants one's young person to survive. Somehow the definitions are problematic.

Gadsden: I agree because context could change quickly, and that is where we come back to Margaret Spencer's early point about perspective. Over time, when people move from one place to the other, they perhaps move from being authoritarian to being more authoritative. If Steinberg thinks authoritative parenting is this elastic concept, that is more malleable than we have talked about it in the past.

Hagen: Again, what is assumed Steinberg was talking about has come up on measures. For example, researchers have a measure that measures and differentiates parents. Those measures in the past had assumptions about parenting circumstances as being more similar than dissimilar. When one has a more heterogeneous group, where the situations are dissimilar, to have a measure that does not indicate the activity in context is a disservice. Thus, not having contextually relevant questions and asking a parent if he or she does this behavior, is creating a disservice for people who have different circumstances because the question is decontextualized.

Wanda Roundtree: I have a comment with regard to context and parenting. Certainly, context is absolutely crucial, but with regard to parenting and parents exhibiting one particular parenting style over another, it is more of a blending. At one point, one can be very authoritarian and at another point very authoritative, depending on the circumstances: what is occurring in one's life or one's past experiences. Thus, it is more of a blending rather than a parent being solely authoritarian or solely authoritative.

Gretchen Butera: I want to comment on the pipeline issues. We should not lose sight of those issues because when we talk about outcomes for Head Start and think about rural communities, the issues related to Head Start components sometimes have a tremendous impact that may not be realized unless we think about the context. For example, transportation is a big issue in rural communities, and sometimes Head Start is the only game in town. Thus, the fact that there are Head Start buses might allow the community to do things that relate to other intervention efforts that would not otherwise be possible. We should not think about outcomes narrowly. If we think about what Head Start is able to do in some places, it does not relate specifically to even children and families, although it does. We cannot think about it unless we think broadly.

Gadsden: Implicit in what you are saying is that the geographic locale of the situation introduces this issue of geographical character. It means some of these issues become much more dynamic and less static. Part of the problem in certain definitions of authoritative and authoritarian is that we lose track of the dynamic aspect of life in context. Depending on the condition, we have to be more dynamic in our thinking about these issues. What helps us is to be guided by normative developmental theory and understanding that the critique ordinarily comes from a perspective that still uses an evolutionary perspective to explain current behavior. That tells us something in terms of static versus more dynamic perspectives.

Julia Mendez: We spend a lot of time thinking about what Head Start is doing for children in the program and less time thinking about what the children are doing to influence us, as the context. Because it is bidirectional and transactional, are our environments flexible enough to meet the needs of the children that are coming into the program, or is the environment so rigid that we are only maintaining where they are already at in their development?

Problems and Possibilities of Assessing Cognitive Outcomes in Head Start

CO-CHAIRS: Carol Ripple, Walter Gilliam
DISCUSSANT: Nicholas Zill
PRESENTERS: Sam Meisels, Barbara Metzuk, Deborah Montgomery

Sam Meisels: Head Start is poised at a critical juncture in its history. On one hand, we have learned more about early development and early childhood pedagogical principles over the past 50 years than we have ever known. Efforts to improve quality in Head Start have focused on exploiting this knowledge and applying it effectively. On the other hand, the rising tide of school accountability is reaching down to Head Start and to other public early childhood programs. Despite the crushingly negative impact of high-stakes testing on the lives of children, teachers, and others in the elementary and secondary school system and the absence of reasonable measures to use for this purpose in early childhood, there is a sense among policy makers that the same principles of accountability that are being applied to older students should be brought to bear on young children.

In some respects, this is not a new experience. For years, the dominating research question in the field was the following: Is Head Start effective? However, the questions are beginning to change. Instead of asking for answers that assume a homogeneity of program, purpose, and service recipients in Head Start, we are seeing new questions rise to the fore, including: (a) What are children learning while enrolled in Head Start? and (b) Are Head Start children ready for kindergarten? In many respects, these questions are valuable and can provide important information to improve practice. Indeed, the performance standards that were instituted as part of the Reauthorization 2 years ago, although limited in outlook, are fundamentally instructional in orientation.

In brief, the performance standards point out that Head Start programs need to focus on children's development of phonemic print and numeracy awareness, their understanding and use of increasingly complex and varied vocabulary, their development and demonstration of an appreciation of books, and progress toward the acquisition of the English language for non-English background children.

Although these standards, especially the last one, are general, the Reauthorization also discussed how they should be measured. The legislation called for the development of results-based performance measures intended to show that Head Start children know: (a) the letters of the alphabet or a special category of visual graphics that can be individually named; (b) recognize a word as a unit of print; (c) identify at least 10 letters of the alphabet, which is the most famous of the new performance measures; and (d) associate sounds with written words.

There are two ways to look at these indicators. From a content perspective, one is struck by the poverty of the outcomes suggested. The measures only ask for letter-word identification, recognition of simple concepts about print, identification of letter names, and simple identification of sight words. From an assessment perspective, other issues can be raised, such as: (a) How will these performance measures be devised? (b) Who will administer them? and (c) How will their validity be evaluated?

To duplicate the errors and recreate the pernicious effects of high-stakes testing that plague kindergarten through grade 12 classrooms would be virtually immoral. Yet many do not understand the problems or issues facing assessment in early childhood. Too many policies about assessment are being made without any awareness of their long-term consequences. We know that conventional tests are flawed in a number of ways. They establish a system in which learning indicators overwhelm attention to learning itself. They draw attention to what is measured, overlooking nearly everything else that is not measured. They encourage a standardized pedagogy for use with a nonstandard diverse student population. Conventional tests offer few rewards for innovation or risk-taking on the part of teachers or students and distort the motivational climate for teaching and learning. In short, my concern is not with tests per se, but rather with how tests are used. The question we have to face in this time of rising accountability expectations is: What role will tests play in Head Start?

In order to think productively about this question, it is essential to make a distinction between two types of accountability. One is consistent with the conventional view of testing, and the other conforms to a more instructional perspective. The first is results-driven accountability, also called normative accountability. It can be defined as public reporting of performance data and use of these data for reward and punishment. The emphasis in normative accountability is on public reporting and use of high-stakes data for instrumental purposes as means to ends that are external to the classroom, rather than using data to improve educational practice directly.

The second form of accountability is instructional accountability. This view suggests that a comprehensive documentation of the process and content of learning represents a form of accountability. It is a way of demonstrating responsibility for what was learned and what was taught. These two ways of conceptualizing accountability are of great importance as we move ahead. The demands for accountability from policy makers invariably concern normative accountability. It is essential to broaden our understanding of how to collect such data.

It is also critical to address instructional accountability. The primary focus of instructional assessment is on individual learning rather than on group reporting. It is not designed to rank and compare students or to be used for high stakes. Its value is linked to its impact on instruction. It guides instructional decision making and provides instructionally relevant information to teachers so that teaching can be enhanced and learning improved. Finally, instructional assessment clarifies what students are learning and have begun to master by providing information relevant to understanding individual students' learning profiles.

One example of an instructional assessment that I have been working on for many years is called the Work Sampling System (WSS). This is an observational assessment used for instructional purposes that helps teachers document and assess children's skills, knowledge, behaviors, and academic achievements. It contains three elements when used in its entirety: (a) checklists, (b) portfolios, and (c) summary reports. The WSS has seven domains, which extend from personal and social development through cognitive development to motor development. It can be used from preschool through fifth grade and is collected in three time periods, so it is a continuous collection of information. It contains data for teachers, parents, children, and others.

Some of the characteristics that mark WSS are: (a) its focus on the individual students, (b) its attention to all aspects of curriculum, (c) its alignment with national standards (which is easier to do from kindergarten through grade five than it is at the preschool level because of the absence of national standards for preschool), (d) its relevance to instruction, (e) its extensive documentation of children's work, and (f) standardized training administration. The research about reliability and validity of the WSS is extensive. When several papers currently under review are published, we will have more validity data published about WSS than about any other performance assessment at any level.

There are other performance assessments that are similar to WSS. The High/Scope Child Observation Record (COR) is one example. Another is Project Construct in Missouri. There are others that are more limited in outlook, but try to measure similar skills and knowledge, particularly in the area of literacy.

Next, I will address normative accountability, beginning with what we typically use for assessing accountability in a normative fashion. The Woodcock Johnson Psychoeducational Battery-Revised (WJ-R) may be the best single test available despite its flaws. The Woodcock is a comprehensive battery that examines both cognition and achievement from a wide range of perspectives. It is administered to individuals from toddlerhood to senescence.

One subtest is the Letter-Word Identification Scale. The task is simple to administer. In spring 1998, the median score for 4-year-old Head Start children in the FACES study was the fifth item. The previous year, the median score was the fourth item. Clearly, this test has a floor problem. That is, the place where it starts is so difficult that many children are not able to show their overall skills in this area. Their scores are, thus, highly unreliable, though there is reliability for the test as a whole.

Additionally, on this test, as on many other tests of this type, the rule is that children must miss a specific number of items in a row—in this case six items—before the examiner can stop administering the test and go on to the next subtest. The experience of failure can be severe since the child has to miss six consecutive questions.

Another problem is what is not tested. This subtest only assesses letter-word identification. Not included in this evaluation of literacy is comprehension, speaking, listening, phonemic awareness, or concepts about print, writing, and literature. FACES does evaluate many of these skills using other assessments. However, the Woodcock includes few of them.

Mathematical thinking is assessed through the Applied Problems Subtest. Children are asked to count items in pictures and solve simple addition and subtraction problems. In the Applied Problems Subtest, Head Start children in the 1998 FACES study rarely got beyond the ninth item. The previous year the mean was below the seventh item. Again, there is a floor effect. There is also a poverty of content. The subtest at this level is focused entirely on computation and neglects approaches to mathematical thinking, pairings and relationships, geometry, measurement, probability, and statistics.

Because the items are narrowly construed, a child whose computational skills are weak, but who has other mathematical talents could present as a false positive on the subtest. On the other hand, because the items have a high floor, children who can pass a few items may get a normatively based high score. However, a more differentiated mathematical assessment might find that the scores of the children normatively are substantially lower. This is the reason there are problems in correlations between the Woodcock on some of these subtests and more discriminating tests in those areas.

Despite these problems, I have used the Woodcock in many studies. However, I have never administered it to a child below age 5. Every time I administer it to a 5-year-old, I feel uncomfortable because I know I am getting incomplete information.

We continue with these kinds of normative tests because when high stakes are applied to instructional assessments, their validity is questioned. Instructional assessments rely on teacher judgments. In WSS, we have collected data that demonstrate the validity of this approach, and we have demonstrated it from a number of different perspectives. However, if teachers are asked to make decisions that will affect their own well-being or the well-being of the children who they are teaching, it is likely they will be influenced and that their judgments will be biased as a result of that.

In short, if we are to operate within a culture of accountability, two types of assessments are needed: (a) instructional assessments to improve educational practice, and (b) normative assessments to provide data that allow programs and children to be ranked and compared. Our challenge is to develop an achievement test for Head Start and other public prekindergarten programs for children living in poverty that provides meaningful information about their learning without distorting programs and stigmatizing children.

Our task is to consider developing a new achievement test or several new achievement tests. It needs to be an individually administered test that is sensitive to individual and group differences. Early childhood assessments that are group-administered have limited validity and predictability.

Second, the assessments should be standards-based. It is difficult to know which items to include on an assessment. This is a problem for the early childhood field. We have Head Start Performance Standards, and several of the state prekindergarten programs have standards as well. We can use these standards, although more work has to be done to try to obtain a common perspective from the field about what young children should know and be able to do.

Third, the scores should be aggregated by program and should sample children rather than adopt a census approach for all children. It is essential that the information obtained in such an assessment not stigmatize or track any individual child. In order to minimize such abuse, individual children's scores should not be reported. Parents would receive a detailed profile describing the achievements of all the children in their child's program. This is commonly referred to as a school's report card. Administrators and policy makers could review this information as well as systematic breakdowns of children's accomplishments by age, sex, SES, previous school experience, and so forth.

Fourth, the assessment should be able to keep track of change in children's skills in terms of developmental levels rather than through comparisons specifically and strictly to a normative group. This is an extremely important point. Using an Item Response Theory (IRT) framework, we can develop an assessment for young children. I have worked with others in the Early Childhood Longitudinal Survey (ECLS) for kindergarten through the 5th grade. We can devise an assessment for young children that will enable us to describe levels or sequences of growth, ability, or development. These developmental sequences are composed of items that represent knowledge and skills ordered by difficulty. The power of this approach is that it allows us to assume that when children demonstrate new knowledge or skills on the assessment this represents not merely the child's mastery of specific objectives, but actually a change in ability or developmental level.

Finally, in this model, the assessment must be used in conjunction with instructional assessment. This is a key point. The model I am proposing is intended to focus on accountability and provide information to program administrators, policy makers, parents, and teachers about the success of the program. However, to reach our goal of improving the achievement of children enrolled in the programs, the new assessment must be used in conjunction with an instructional assessment that focuses on classroom experiences to assist individual children.

In this approach, the core areas would include literacy, numeracy, and mathematical thinking. It could be broader, but this would be a start. The assessment would use familiar materials and manipulatives and would take about 20 to 25 minutes. There would be a fall and spring administration. The age range would be 3 to 6 years of age, approximately. There also would be a two-stage administration, which we have done in the ECLS and entails a routing test that places children either in high, moderate, or low ability so that the assessment itself is more focused.

Furthermore, by having a large bank of items—which again, we are doing in the ECLS—and using a computer-assisted personal interview, we can change the items that different children are asked. Using this method, different sets of items that stand for the same level of achievement can be administered to different children, thus reducing measurement-driven instruction and teaching to the test.

In conclusion, this approach should be used in conjunction with an instructional assessment because if used in isolation, it will only measure outcomes and may not have a positive impact on the process of teaching and learning. When combined, instructional assessment can have an impact on normative assessment.

This example involves third and fourth graders. I do not have data on younger children because of the absence of a normative measure in which I have confidence. For this study, we used the Iowa Test of Basic Skills (ITBS). We conducted research in the Pittsburgh public schools with children who were almost entirely minority and poor. The schools had the lowest scores on the ITBS in the Pittsburgh schools. We examined their trajectory of change, from 3rd to 4th grade, comparing WSS children to a demographically matched comparison group as well as to the average of all other children in Pittsburgh.

On the ITBS, the trajectory of change for WSS children is about 25 times greater than their demographically matched comparison group. There is also a large difference between the district average and the WSS children. We analyzed the data to determine if the results were pulled by higher-skilled children or lower-skilled children, but the gains were across the board.

Barbara Metzuk: I am with the California Department of Education, the Child Development Division. We have a project called Desired Results for Children and Families, which was started about 3 years ago. We were not allowed to use the term "outcomes." Also, we were to develop the desired results before examining the existing standards. This is a different approach from the one Head Start followed. We formed an advisory group consisting of people with infant-toddler, preschool, and school-age child care backgrounds. The people working on this project have been theorists, researchers, and practitioners working in center-based programs and family child care homes serving infants and toddlers, preschoolers, and school-age children.

The other reason for this project was to gather data for legislators to see whether our programs were working. We were looking for a quick assessment of the development of our children that would not be too cumbersome for programs but that would also be developmentally appropriate. We decided to use a child-observation instrument for individual children. This time, all of our teachers are required to conduct a developmental profile for infants and toddlers four times a year, for preschoolers twice a year, and for school-age children once a year. We are increasing the school-age observation to twice a year.

For infants and toddlers and preschoolers, we looked at developmental progress. For the school-age children, we looked at needs, interests, and hobbies. It is an informal approach because some of the programs for school-age children are recreational, some are educational, and some are a combination of the two.

We began to discuss the desired results with our advisory committee. While the results seem simple, it took a long time to identify the set. The desired results state that children: (a) are personally and socially competent, (b) are effective learners, (c) show physical and motor competence, and (d) are safe and healthy. We did not focus on healthy development or safety as much as Head Start. Those requirements are in our licensing piece through the Department of Social Services.

We knew we could not assess the desired results as they were. Jacquelyn McCroskey, an expert at developing outcomes at USC, advised us to start with desired results that are broad and that explain well-being but that could not actually be measured. Next, we developed indicators and then measures that we could use with children in the classroom.

At the same time, we were directed to identify desired results for families. Identifying the developmental areas was not difficult. They are different than Head Start because our programs do not conduct home visits due to funding restrictions. The desired results for families could not be obtained by direct observation. We used a self-report parent survey. At the beginning, we tried to assess whether parents were using positive discipline strategies with their children, but decided that discipline was outside our responsibility and that we could not assess it. Instead, we determined that discipline involves whether parents are getting information from us on learning and development. We decided to look at whether parents were working with their children on areas related to the desired outcomes, but not to directly measure how much reading they were doing with their children and so forth.

The second desired result for families, achieving their goals, started as economic self-sufficiency. We know that our programs contribute to this because parents have to be working, in training, or going to school. We also discussed child neglect and abuse. We broadened that category to general family goals, including economic self-sufficiency and other areas.

The Desired Results System will have many beneficiaries, the first being the children. The individual assessment instrument is to be used as an instructional aide as well as an assessment tool. We are going to require the same profile with different age levels to be used by all of our programs. They no longer will be able to use any tool they want as a developmental profile. Many programs had developed their own. Some were good, and some were not as good. Our expectation is that programs will use it to see the children's development in their program and then change their instructional program on an individual basis.

Parents will benefit, as we plan to share information with the families through a summary sheet. Another beneficiary of the Desired Results System will be our department, as it will enhance the technical assistance we provide. Our technical assistance and training depends on our children's developmental profiles as well as the program standards. After we developed the developmental profile, we examined our standards and added more, many from Head Start.

One other piece of our system is the Levels of Achievement. We are not holding our teachers accountable for percentages or specific outcomes, but we want to see progress. Our achievement criterion is progress from the beginning of the year to the end of the year. Accountability is based on the program standards.

Deborah Montgomery: As part of the project, we developed a matrix that contains all of the measures from birth to 14 years of age by desired result, indicator, and measure. Each profile takes the measures off of the matrix and is turned into an instrument using a 4-point scale. There are individual instruments that correspond to the seven age groups.

We have been pilot testing the preschool instrument this past year and have been aiming to condense the instruments. We have tried to balance the complexity of development with the burden on teachers, aiming to incorporate all of the developmental domains and yet make this doable for teachers. The idea was to determine what is measurable within programs during typical daily activities. What are the kinds of things that teachers would likely be seeing? We looked for positive statements of behavior that might demonstrate achievement across these constructs.

We have been working with the California Department of Special Education. They are interested because the Individuals with Disabilities Education Act (IDEA) requires similar attention to student outcomes and the ability to show student progress. They need to establish performance goals and indicators for students. Also, students with disabilities must be included in all large-scale assessments. We have also developed a set of adaptations and accommodations and a guidebook to accompany our system. Teachers will be able to use the same measures with all children using whatever adaptations might be necessary. This was a unique situation where the two agencies worked closely together with the goal of having a common instrument, process, and outcomes. The adaptation is not intended to provide a child with an unfair advantage or alter the level of developmental construct. The adaptations are there to support the child's ability to demonstrate their level of proficiency so that a disability is not a barrier.

In addition to the child developmental profiles, we have developed a parent survey, which has been refined to two pages. The parent survey is designed to obtain input from parents about what the program might be able to do to help them support their children's learning and development. It includes some parent satisfaction items. It also includes information aimed at being useful for legislators, such as whether the child care provided enables a parent to maintain a job or increase their skills. This will provide some consistent data across the state that will be powerful in supporting programs. The first round of pilot testing using the parent survey had a high response rate, and programs seemed to like the instrument itself. They felt it gave them information about their program that they could use to improve their services to families.

The premise of the Desired Results System is that we are interested in how children are doing and their progress over time. However, it is not to be used as a high-stakes instrument for sanctioning or rewarding programs. Programs are required to collect the Desired Results data, but they will only be collected on a sampling basis and not at the individual child level. We have encouraged the state to aggregate the data to the program level and to provide programs feedback in order to give them a sense of how they are doing, similar to the report card idea.

The data collection piece is one of the new program standards. However, accountability is based on implementation of the new standards. Carollee Howes helped us develop a new set of standards, many of which come from Head Start, that are intended to support the desired results.

Since there are many programs in California that are cofunded with Head Start and state funds, we did not want to create a new set of standards. We tried to pull from Head Start anything applicable to California's program, thereby establishing one set of standards for programs to follow. The programs will be expected to implement the standards. The Early Childhood Environment Rating Scale (ECERS) instruments for infant-toddler, early childhood, school-age, and family child care will be used as part of the program self-study and state team review, in addition to another instrument that will incorporate other program standards.

The program standards themselves have categories that pertain to the categories required as part of the elementary and secondary school standards. However, infused in these categories are items such as meeting compensation guidelines for teachers, reducing turnover, continuity of care, and time with primary caregivers. We tried to base our standards on the research. We reviewed all existing standards we could find and compiled the new standards with guidance by age level in one document.

Accountability is based on a review of the program. Programs have always had to conduct a physical audit and a self-study. The self-study will be required to use the ECERS. The state intends to develop some rating of programs based on the results of the ECERS and other scales. Thus, there will be an exemplary rating, a standard rating, and a substandard rating. Programs will target technical assistance based on those results. From the beginning, the work group has said that this will not work unless the state supports the system with training and technical assistance. Indeed, training and technical assistance will be part of next year's planning.

Metzuk: We face many challenges as we try to implement this system statewide. One is the dual purposes of data collection statewide and at the program level and fitting the two purposes together. A second challenge is engaging the field in the design process, which we have been good at. We have been out in the field for 3 years, and as we have moved along, we have sought input. Practitioners have helped us with the profile and the standards and will continue to do so as we go along. When we began, there was opposition in the field. However, now they are eager to begin and are already using the developmental profile even though it is still in draft form, as well as the ECERS.

The third challenge is balancing standardized formats for data collection with local autonomy. At the beginning, programs wanted to use an existing instrument if they had a good one. We said programs could continue to use existing instruments, but we also needed statewide data reporting. Our state preschools are more academic than many child care programs. They will be adding additional items that fit in with their content and performance standards.

Confidentiality is also a challenge. Data gathered on the children at the state level will arrive with child identification numbers. We will not know who they are and will be aggregating the data. We are not interested in and will not look at individual children. However, we will look at groups of children, such as rural and urban children and so forth.

The fifth challenge is setting criteria for acceptable levels of achievement. We have not done that. Instead, we used progress and whether children are able to accomplish measures by the end of an age level. We want to focus on program quality in terms of accountability for programs. We have no intentions of using this as high-stakes testing for retaining or promoting children. The purpose is to get a picture and to help children at the local level in their programs and classrooms.

Nicholas Zill: Both of these presentations have had wonderful and stimulating ideas with which I agree. However, three clichés come to mind. First, the road to hell is paved with good intentions. Second, too many cooks spoil the broth. Finally, one of my favorites, the perfect is the enemy of the good. The case of the California Desired Results System shows an impressive effort by many cooks to create a system that strives for perfection. Sam advised the field to move from our relatively flawed assessment system toward one that is more perfect. We should always be searching for ways to assess children and evaluate their environments better. However, often, the perfect system is difficult to implement.

An alternative approach, which we have used in Head Start FACES, is to implement, in a relatively quick way, a system that is the best that can be done and is not too burdensome. The FACES battery is based on evidence that certain skills are predictive, includes assessments that discriminate, and provides useful information about children and families.

I fully support the effort to develop better assessment systems that measure a broader range of children's skills and knowledge. However, it is also important to go into the field and implement some of the existing assessments to see how they work. We learn when we are trying to assess children, particularly on a large scale. I will show some evidence that this kind of approach is useful.

Certainly, comments about the distinctions between results-driven versus instructional accountability are well taken. We particularly want to guard against bringing down the standards approach, which is ill thought out at the elementary and secondary school level to the preschool level. We also want whatever we implement to benefit instruction. In fact, one of the best definitions of a high quality teacher is one that includes Vygotsky's zone of proximal development—a teacher who knows a child's developmental level and plans activities that are challenging but not frustrating. Evidence from Georgia State with respect to the individualizing dimension of the Assessment Profile, which is strongly correlated with children's outcomes, supports this viewpoint.

The Head Start Bureau is currently dealing with the question of what to recommend to local programs concerning the use of observational measures as opposed to direct child assessment.

A few things are problematic with an observational measurement system. Many observational systems have yet to demonstrate reliability. Their interreliability is important. They also have to answer the problem of credibility. If the teacher produces the score, many policy makers are going to say, rightly or wrongly, that she or he is providing the information on which she or he is being evaluated. There is at least the appearance of conflict of interest.

There is also the question of the cost in time and resources to train teachers to implement the system. A system that is ambitious and covers multiple domains becomes a burden in and of itself. A system may be desirable, but the benefits must outweigh the costs. A direct assessment system or a mixture of observation and direct assessment might be more cost-effective than one that is totally based on observational procedures.

California's system reflects a desire to use multiple indicators. Certainly, the complexity of the environment in children's development dictates that we cannot summarize results in a single number. However, politicians, including former Governor McKernan, head of the goals panel, keep asking for fewer indicators and numbers. As the system becomes more complex, we lose some politicians. We need to consider how to narrow our results down to a relatively simple message for policy makers who have other competing priorities.

Secondly, while stating all indicators in a positive fashion sounds like a good approach, it will result in a loss of validity. If all indicators are measured as positive statements, particularly with parent interviews, the results will show a halo effect with high interitem correlations and not much discriminating ability. However, if the wording is reversed and stated in a negative manner, some discriminating ability appears. The same parent who reported all positive traits about their child will now report some negative traits as well. The negative ratings are more predictive of teacher reports than the positive ones. Many teachers are concerned about problem behavior, and if those issues are not asked, they will not be reported, even though they are important for children's school adjustment.

The family assessment instruments that California is moving toward also struck me as moving away from asking about direct things that parents can do with children that impact their development. We found in FACES that asking about activities such as frequency of reading, even though parents probably overreport their absolute level of doing those things, is discriminating and does correlate with children's progress. It is a good idea to ask these questions, but in a compact and discriminating fashion.

I am supportive of both California's Desired Results System and the plan that Sam Meisels outlines, but there will be problems when they are implemented. Sam claims that if we apply these better assessment systems, we will achieve better learning results. That claim is not proven. He presents some evidence, but it is incumbent on him to produce credible data to make the case. New observational assessments represent for many school and preschool systems a substantial investment of time and effort. The question remains whether they produce gains in children's achievement.

FACES is based on a sample of Head Start children. It uses a multimethod, multisource approach, which gathers data from parents, teachers, and direct observation of children's social behavior. We have a simple 30-minute child assessment that is individually administered by people without advanced degrees. We ask the children to provide some social information to us verbally, such as their name, age, and birthday. The battery includes: (a) the Peabody Picture Vocabulary Test (PPVT) to show the meaning of spoken words; (b) the McCarthy Draw-A-Design; (c) the Woodcock Johnson Letter-Word Identification, which is recognizing letters and words; and (d) the Woodcock Johnson Applied Problems, which involves solving simple number problems. The battery also contains a dictation task, which involves prewriting skills and writing letters.

We also look at print familiarity. We read the children a book and ask them about the front and back of the book, how print goes, and some simple comprehension questions. It does not cover all the domains we would like. We attempted to collect more phonemic awareness data and are still working on a way to do that. We found floor effects in some of the measures we previously used.

One of the reasons we chose the Letter-Word Identification and PPVT is that scholars like Snow, Whitehurst, and others have pointed to two dimensions of emergent literacy: (a) knowledge of words in the outside world, and (b) decoding skills. Both of those skills are predictive of children's success at reading in the 2nd and 3rd grade. We considered reading to be central to children's school success, which is the reason we chose those particular assessments. There is evidence that they are predictive, which is contrary to what Sam was suggesting.

This assessment protocol does provide information that is important for instruction. We found that a majority of children enter Head Start with literacy skills below national norms. About 63% of children are below the standard score of 90 in vocabulary, and 71% are below the standard score of 90 in early writing skills. In repeating the assessment from fall to spring, we found that children make gains in Head Start. The percentage with a standard score of 90 or above in vocabulary rises from 37 to 47%, and the percent with a standard score of 90 or above in writing skills rises from 29 to 39%.

We also found that Head Start children did not show gains in letter recognition or book knowledge. Indeed, according to teacher report and observations of classes, many Head Start teachers did not teach any kind of use of language or letters. There has been perhaps a misinterpreted sense of developmental appropriateness toward almost shunning this kind of activity. We also found that children who enter with lower skills made greater gains in Head Start.

In other words, these imperfect tests found that Head Start children enter the program generally below the mean (a standard score of about 85), but that there is a good deal of variation. The children in the lowest quartile have standard scores of 65, whereas those in the top quarter of Head Start are at the national norm. That is true in each of the assessments that we use. The children in the lowest quarter make substantial gains in vocabulary and even greater gains in writing, but those who come in at the national norm make virtually no gains compared to national norms. However, in letter-word identification, a different picture emerges. None of the groups is making progress compared to national norms.

Thus, immediately, these simple assessments, administered on a large scale and done on a representative sample of programs, relay important information about Head Start. Data reveal Head Start's successes and areas in which it may be weaker. These findings have immediate instructional relevance. These same subtests have predictive validity. A number of measures predict from the end of Head Start to children's performance at the end of kindergarten. For predicting letter-word performance at the end of kindergarten, the overall multiple correlation is .54, which is not perfect but is good. The emergent literacy data from the parent report provide additional assessment and predictive information. Also, the teacher's rating of aggressive or disruptive behavior in Head Start is negatively correlated with performance at the end of kindergarten.

These measures also predicted to other domains, such as a national sample of kindergarten teachers' ratings of problem behavior. The Head Start teachers' rating predicts positively to the kindergarten teachers' rating, but the letter identification score, the vocabulary score, and the parent rating of problem behavior at the end of Head Start all contribute to the prediction of the teacher rating of problem behavior. Children who have lower scores get worse ratings of teacher-reported problem behavior at the end of kindergarten. Many of these correlations, while not perfect, are statistically significant and suggest that this kind of battery has validity in terms of predicting how children achieve later in school.

Observational efforts are certainly desirable. We need to improve our assessment measures, and we are trying to improve FACES. In recommendations to individual programs, we have to follow many of the principles that Sam and the California team proposed. However, we also should carefully examine our assessment instruments and their costs and benefits and develop a system that is workable and provides the information that everyone at this table desires in a way that balances the feasibility against perfection.

Meisels: I would like to make an important distinction. Observational assessment is a direct assessment. If it is not a direct assessment, it is not observational assessment; it is teacher report. Work Sampling and the COR require that teachers see, document, and evaluate what they see. That is direct assessment. Teacher report is something different. It is important to recognize that the kinds of observational assessments we are discussing are direct assessments as contrasted to teacher report forms. In the ECLS-K, we created an indirect measure that teachers use called the Academic Ratings Scale. That is different from direct assessments and different from performance assessments and authentic assessments.

Nick raised the question of whether we can we trust teachers' judgments when using observational measures. That is a key question. The developers of instruments of this type have the responsibility to try to answer that question. One way to answer it is to administer the observational assessment and another type of assessment independently and then compare the two. In fact, we have done that research with Work Sampling, and High/Scope has done similar work with the COR.

That does not necessarily show that achievement has improved. It shows that we are learning the same thing with two different forms of assessment. A perfect correlation is not desirable because the performance assessment would not be used, only the simpler and less expensive model. The performance assessment is used because of the gains that teachers can make in terms of being able to learn about individual children in ways that they otherwise would not. The Woodcock does not teach the same things as a performance assessment.

It is difficult to answer whether an assessment improves learning. I showed some data that seem to indicate that, indeed, it does. However, it is hard to find that information. We have some information for students in third and fourth grade.

My last point is about reliability. How can one obtain reliability on an observational measure when that requires having two independent observers in the same situation with the same children who will be able to annotate their observations? It does not happen. Two teachers in the same classroom will always share information with one another and will be influenced by one another.

Reliability can be obtained with different kinds of ratings, such as portfolios, where a teacher rates the portfolio and then an outsider rates the portfolio. However, the ratings from the Desired Results, the checklist of Work Sampling, or the COR cannot because the observers are not independent. There is a strong psychometric line of research that shows that validity can be demonstrated without reliability. Ultimately, all developers can do is be extremely clear about how teachers are supposed to keep track, document, and evaluate their observations.

If we have better measures, we may get different results. I have no problem with what is being assessed in the Woodcock, although it is narrow. However, because of its narrowness, there may be children who are being misclassified as high or low because they can do other things with literacy, except letter-word identification. Head Start has a diverse population to which we need to pay attention. We need to conduct research like FACES but also develop new measures to improve future research studies.

AUDIENCE QUESTIONS AND COMMENTS

Question: If you were talking to a group of Head Start directors who have to measure outcomes in the fall, what would you advise them to use?

Meisels: I would tell them to use an observational assessment. Observational assessments would get programs the most for their effort, because the effort that is put into learning to use it has great potential for improving their practice. Yet programs need to implement assessment approaches gradually. The Desired Results is a large matter. Work Sampling is a large matter, but classrooms are using Work Sampling in small pieces throughout the country. If the data are aggregated, programs can use instructional measures to examine change over time. However, they should not be used to assign stakes, because once consequences are assigned validity is lost.

Question: How would you respond to the requirement that Head Start children know 10 letters?

Meisels: We suggest that phonemic awareness and phonological knowledge are extremely important and propose indicators along those lines and careful guidelines about how to recognize those skills and classroom strategies to achieve them. The 10 letters are included in those guidelines. However, teachers do not have to teach 10 letters, because they should be creating a literacy-rich environment in which 10 letters are easily learned. The knowledge needs to be checked, but that is fairly easy to do with a checklist.

CONVERSATIONS WITH EDWARD ZIGLER, GROVER WHITEHURST, RICHARD GONZALES, AND SARAH M. GREENE

Advisory Committee on Head Start Research and Evaluation

CHAIR: Sarah M. Greene

Edward Zigler: Research in Head Start has a long history. In the beginning of the program, the planners of Head Start, including myself, had to do everything quickly. We were planning for Head Start in the spring, and were going to start in the summer. There was an argument within the Head Start planning committee as to whether we would conduct any research at all. Being a researcher, I argued for research. The idea of mounting a program with 560,000 children and not study its efficacy made no sense to me. Finally, the committee realized we would not reach consensus. However, Julius Richmond, the first director of Head Start, managed to add research to Head Start. My students and I devised a research plan and created measures, borrowing from the work of colleagues. Although it may not have been a rigorous piece of evaluation research, we at least got in place the principle that Head Start would conduct research on itself.

The argument against research also has merit. Some of the planners did not see the need for an evaluation, and many Head Start practitioners feel that way today. Head Start is providing education, health care, nutrition, and other services to at-risk children and their families. The parents are highly satisfied. The experience has to be positive. There is nothing to research. However, from the viewpoint of policy, that route would have been wrong. In fact, Head Start has never allocated sufficient funds for research. Head Start should dedicate a percentage of its budget to research and development because research is not empty. It feeds back into the program and improves it.

In the late 1960s, we saw the impact of research when the Westinghouse Report was released. In that same period, we first heard the notion of fadeout, in which children showed immediate gains from Head Start, but, over 3 years, the gains faded away. It was devastating for Head Start. This led to the planned phase-out of Head Start in 1970, all because of a poorly designed evaluation. After its release, many researchers discussed the study's methodological weaknesses, and Head Start continued.

Now, 35 years later, we have a running argument. Does Head Start work, or does it not? The more sophisticated question not asked 30 years ago, but asked today, recognizes that it is not enough to ask yes or no. Head Start will work for some people, and not for others. The yes/no question is a simplistic question to put to the value of Head Start.

The problem in determining whether a program works or not is establishing the criterion. I like the statement we wrote when we invented Head Start, but it had many goals and the ultimate criterion of success or failure was never clear. Without a goal that is clearly enunciated, determining success is difficult. For instance, Head Start is a large deliverer of health services by linking people with low incomes to health providers. Head Start would have probably paid for itself solely on its benefits for the health of children from families with low incomes, but gets no credit for that. Unfortunately, after the birth of Head Start, everybody evaluated Head Start on the basis of IQ scores. It is not fair to place the value of a program on the change in one of the most stable measures in psychology. To break out of the IQ knot, I developed the concept of social competence. Head Start's goal was to improve the everyday social competence of children.

I am indebted to the Congress in 1998 for stating for the first time that the ultimate purpose of Head Start is school readiness. How much can Head Start accomplish with children from low-income families in a typically half-day, year-long program? We can impact school readiness. My definition of social competence and school readiness, as defined by the National Education Goals Panel, are parallel. They both include health, achievements, motivation, and emotional factors.

We also have to pay attention to the independent variable, Head Start. For many years, the quality of Head Start declined. The 25th year report by the National Head Start Association, as well as my own 15-year report that President Carter asked me to prepare, both point out the variability in program quality. If Head Start is to work, we need quality programs. In collaboration with the National Head Start Association, we fought to improve the quality of Head Start, thereby saying that the independent variable we are assessing is the variable it should be.

However, recent events prior to the 1998 Reauthorization precipitated the Advisory Committee's work. When the Congress needs information, it turns to the Government Accounting Office (GAO) for answers. The GAO is a fine organization: They are objective and do their best to determine the best answer to give Congress. Thirty-two years into Head Start's history, and the GAO was tasked with answering the question of whether Head Start works. However, we did not have the evidence. The strength of our findings will depend on the services the control group receives. Thirty-five years ago children were receiving little if they were not in Head Start. Today there are 42 states with prekindergarten programs. The comparison group is not a pure control group anymore, and it is impossible to have such a group. We should have conducted a random assignment study 25 years ago when there were not as many other early childhood programs in existence.

The GAO was confronted with the effectiveness question from Congress. I was a consultant to their effort, and made the argument that Head Start can be demonstrated to work. They issued a report, which is a public document, which stated that there is no answer to the question of whether Head Start works or not. There are complaints about the studies that have been done. First, most of the research is too old to determine the current success of Head Start, and second, most of the studies were methodologically weak in demonstrating causality. There are numerous studies that show Head Start children do better than comparable non-Head Start children, but they employed quasi-experimental designs without the impact of a gold standard random assignment study.

This GAO report led Congress, in legislation, to charge the Department of Health and Human Services (DHHS), where Head Start is located, to convene an expert panel to design a national impact study for Head Start to answer the question, again, does Head Start work?

Grover Whitehurst: For me, this was an exciting Committee on which to serve. Members were diverse, consisting of people who have hands-on experience with Head Start as well as the more famous methodologists and research designers in the country. We met three times in 1999. There is a public report of the Committee's conclusions, "Evaluating Head Start: A recommended framework for studying the impact of the Head Start program," published by the Department of Health and Human Services.

The Committee struggled with the charge from Congress as well as the difficulties inherent in being responsive to that charge. An excerpt from the legislation that resulted in the formulation of the Committee reads that the research should use "rigorous methodological designs and techniques based on the recommendations of the expert panel, including longitudinal designs, control groups, nationally-recognized standardized measures, and random selection and assignment. The assessment or coordinated assessment should include comparisons of individuals who participate in Head Start programs with control groups, including comparison groups composed of individuals who participate in other early childhood programs, and individuals who do not participate in any other early childhood programs." It further indicates that, "this comparison of impact should be at several points of time" so that children would be followed from Head Start into early elementary school.

Thus, we were tasked with addressing the national impact of Head Start, where national impact is defined as the difference between the performance of children who attend Head Start and the performance of children who do not attend Head Start. What is the effect of Head Start on the agreed-upon outcome measures? The subsidiary question is how and why does impact vary? For example, does impact vary by the quality of the Head Start program? Does it vary by whether the program is in a rural area or an urban area? Does it vary depending on the characteristics of the children who are being served?

We agreed that the design of the study had to be credible. That is, once all was said and done and the numbers were analyzed, the consumers in Congress and elsewhere had to believe that the data could be relied on as measures of the impact of Head Start. It also had to be feasible, as the budget is not unlimited. There are realities in the way that Head Start has penetrated the country and so there are problems with designing a study that measures impact. It had to be practical and responsive to both the written legislative words as well as the presumed intent of the people who had written those words.

The Committee decided that the strongest way to accomplish this that was credible, feasible, and responsive was to recommend a random assignment design. This was, in fact, called for in the legislation. How could this be conducted? In some sense, one could say this is like Congress mandating a study of the impact of 2nd grade to the extent that any intervention approaches universality, to that extent it becomes impossible to conduct a random assignment study in which children who receive the service are compared with children who do not. Head Start serves about 50% of the eligible 4-year-olds in the country. This varies by region. In certain areas there is virtual universal coverage of children, and extensive waiting lists in others. We decided that a random assignment design would only be feasible in situations in which there were programs that had substantial wait lists, where there are fewer services available than the demand for those services.

There was much discussion about the variation that should be studied. There was concern that there are literally hundreds of interesting questions one might ask about characteristics on which programs and individuals vary. There was also a sense that if we veered off into consideration of all these questions the design would get so complicated and cumbersome that it would move away from the central question: What is the impact of Head Start? Thus a decision was made to study variation in quality, in region, in children, and in setting as the central questions of variation on which to focus.

Much discussion took place by the methodologists on the Committee about how to examine variation. Some people on the committee proposed and felt strongly that the sample should be selected randomly from existing Head Start programs. However, we also agreed that there would be some programs that could not participate, for example, because the areas were saturated with services. This situation called for a random sample that occurred with replacement. If a chosen program could not participate because there were no children waitlisted, another program would be picked until the number of sites to be sampled was reached. However, other experts on the Committee felt that the type of national impact studies done in other areas, for example, in public health, rarely used random samples or stratified random samples. Rather, the technique that is often employed is purposive diversity, in which programs of a variety of characteristics are selected because they have a range of characteristics of children and represent areas of the country. Rather than sampling randomly, programs that are able to participate are chosen that vary substantially in terms of their characteristics. Ultimately no decision was made by the Committee as to which of these strategies to use. Rather, the sense was this would be left to DHHS and the contractor for the study.

The Committee also discussed what programs to exclude. An agreement was reached that programs would not be included that were noncompliant with the Performance Standards. Further, it would not be reasonable to include programs that were brand new in the study.

What incentives should be provided for participating? Both the intuitions of the Committee and the experience from the Head Start Quality Research Centers that had done pilot random assignment studies indicated that programs and parents need some incentive to participate in the research. From a program's point of view, why go to all this trouble? Random assignment requires that programs change their ordinary procedures for enrolling children and families. It is problematic in terms of the message programs send to parents and children about the reasons certain families can participate and others cannot. Incentives to programs might include funds for expansion in the subsequent year.

Why should a parent agree to this? That is, if a family has a low income and a high need, there are many situations in which there is a virtual certainty that they will receive Head Start services. Yet parents will be asked to sign an informed consent form in which the probability of having their child served by Head Start drops considerably. In terms of incentives to parents and families, there was a strong sense that participants need to be paid for the study. Further, we are proposing a design in which the same measures are collected on control families as Head Start families. The study needs people to come back to be assessed a number of times, and they need to be paid to do that.

This evaluation is going to be focused on traditional Head Start for 4-year-olds. It will not include Early Head Start. The measures of child behaviors and skills will be collected as children enter Head Start as 4-year-olds, as they exit Head Start, sometime during kindergarten (presumably close to graduation from kindergarten), and close to graduation from first grade.

Head Start program quality will be measured sometime between the pre and the posttest measures. These will be measures like the Early Childhood Environment Rating Scale (ECERS) and other observational measures of the quality of the program being delivered by the participating programs. The quality of the control settings in which many of the children will be attending will also be assessed, including state prekindergarten programs, for-profit nursery schools, or any of the variety of options available.

There was also a strong sense that the same measures needed to be administered to both control families and Head Start families. The focus of Head Start is school readiness, and thus the measures should assess school readiness, including measures of emergent literacy, social behavior, and health. The Committee recommended that there should also be measures of parental practices, for example, practices at home that might foster emergent literacy, or parental involvement in Head Start and in the schools because parental involvement has been an enduring focus of Head Start.

The Committee discussed at length how to handle the growing population of children in Head Start for whom English is not their native language. About 25% of children nationally being served by Head Start are children for whom English is a second language. There was concern that the available battery of tests and measures for the outcomes are, when they are available at all, available for children who speak English. Thus, part of the study should involve the construction of measures that are appropriate to children for whom English is not a native language.

The legislation required that the study be finished by 2003. The Committee concluded that this was impossible—that 2006 was closer to when it would actually happen.

Sarah Greene: My first reaction as a member of the Committee in the first meeting stemmed from the work that I had been doing the previous 6 months, which was preparing for the celebration of Head Start's 35th birthday. At NHSA, we were doing two things. First, we were collecting Head Start success stories from around the country from former students, parents, and staff who had participated in Head Start and were now making a positive impact on society. Second, we were holding hearings around the country on our report, Head Start 2010. Again, we were hearing positive stories from Head Start as well as problems that have existed since Head Start started and still exist today. We also heard recommendations for what needs to be done to make Head Start remain a viable and exemplary program.

In Head Start's 1998 Reauthorization, based on the report from the GAO, there was no existing research that demonstrated the impact of Head Start. That surprised me as well as other practitioners because we know from what we see that it does work. After that realization, another fact occurred to me that any grantee receiving Head Start funding has a responsibility to run a high-quality program. If we needed research to demonstrate that, then let practitioners on the Committee lend their expertise to ensure that the question can be answered with credibility.

My comments focused on a few areas. First, there is extensive flexibility in terms of how Head Start is operated throughout the country. There are rural programs and large urban programs. There are programs that outsource certain services as well as those that provide all direct services. Head Start programs are very diverse—not just the population, but how the programs are operated. We discussed the differences in Head Start all over the country that had to be taken into account in order to make this study work.

Second, the grantees that operate Head Start are diverse in terms of staff qualifications, the hours of operation, and other differences. There is such a vast difference in program operations around the country that it was hard for us to envision how research could be designed to capture all of the variation.

Third, Head Start primarily serves the children with the greatest need. While school readiness, which was always our definition of social competence, is now in the law, if children are coming to Head Start with severe problems, such as not speaking at age 3 and 4, school readiness at age 5 may not be realistic. Programs need to clearly document the developmental levels at which children enter the program and have evidence of the services they provide the child. By the nature of the needs of children and families we serve, every child is not going to leave Head Start ready to enter first grade.

Finally, I want to mention that there may be new members in Congress by 2006 whose focus may be entirely different. We want to make sure that there is no punishment for Head Start, regardless of what the research shows. The study ought to assist with program improvement. If there are areas in the program that are weak, this study will show what Head Start needs to do to improve. By the same token, if it shows a positive impact, then Congress should continually expand the program and fund the necessary resources for research.

Richard Gonzales: For a long time, Head Start programs and administrators closed their eyes to the need for research. Many of us knew that we ran quality programs, and we were not going to push for research to prove it. Now, we need the research. Historically, the Head Start community was against the concept of using control groups in research. We considered it unethical and immoral. There are people who are concerned with the ethics of random assignment. Yet, not only is random assignment a Congressional mandate, but researchers have told us that the research that is most valid uses control groups and random assignment. Over the years we have begun to sensitize our programs to the value of research. However, many programs still do not fully understand that.

Another recommendation of the Committee was that Head Start needs a comprehensive research agenda, not just an impact study. A coordinated research plan has to remain a key point in examining Head Start's performance. We recommended strongly that the impact study not be a substitute for other research, but be a rich part of a program of research. Therefore, quasi-experimental and other types of studies without random assignment would still provide important information. For example, the Head Start Family and Child Experiences Survey (FACES) will continue and will speak to the issues of the quality and effectiveness of Head Start.

We were also concerned about methods of differentiating between Head Start and other early childhood programs. Many of the programs in the various states use Head Start as a model for their philosophy and standards. In New York, for example, the state's universal prekindergarten program is based on many of the Head Start Performance Standards.

As Head Start administrators, it is important for us to begin to have the mindset of being prepared to be in the study. The research is going forward, and the results of the research are going to impact all programs. It becomes important for all of us to recognize the importance of our perceptions to the research and how we approach it. Simultaneous to this research project is the new requirement for programs to measure outcomes in their local programs. As we move ahead on the outcome monitoring, the new monitoring process, the PRISM will be further modified to include outcomes. Thus, programs have numerous outcome-based initiatives beginning over the next few years that are going to impact quality.

We have an opportunity to implement procedures and measures of school readiness, and practices that will support school readiness. It is important for us to recognize that the Committee's recommendation were made in the context of the larger Head Start world and the demands being made on programs. For me, the next 18 months seem like a window of opportunity to look closely at our practices and to make some modifications if we deem them necessary.

Every program is required to conduct a self-assessment of its program. Some of us may have gotten comfortable in our self-assessment process. The message to us is loud and clear that we need to look with different eyes at how we are implementing the program and what the impact of our program may be. We have an opportunity to conduct some outcome-based assessments on our own. The decisions we make now about outcome measurement and changes in implementation will directly impact any study being done on the programs that might be selected in the study sample. The impact study is important, therefore, not only because we are mandated to do it, but also because it forces us to focus on how to implement outcome measures and to reflect on how we as practitioners can link with the research community to examine our current practices.

Greene: The NHSA plans to continue to work and promote a good understanding and support of this project and how we can help make it work. We heard from Head Start programs that had been a part of research what it entails to participate in research. Often, programs do not realize from the beginning the level of involvement required. We want to encourage programs. We want to provide all the support we can to make sure that the researchers get the right information. That might translate into asking for another staff person from that researcher because the involvement can be intense. A person who can serve as a liaison between a program and the researcher to be a part of the study can be helpful.

Question: Are there parameters associated with school readiness, including the medical, social, and educational domains?

Zigler: Is there agreement on concrete measures of school readiness? The answer is no, and that is one reason this study is going to be important. We are all searching for agreed-upon consensual thought about a set of measures. However, the number of measures is immense. On the positive side, I have examined many of these measures and they are all highly correlated, especially in the cognitive domain. However, there is not as good measurement in the social-emotional domain. Additionally, experts in measurements, such as Sam Meisels, have raised concerns with the validity, reliability, and psychometric qualities of measures for children this age.

As states such as Missouri and California begin to develop accountability systems for their preschool programs, they are using measures. I would recommend, in terms of having some federal imprimatur, examining the FACES study, in which the sample included 40 random sites. They are about to begin a second cohort of 40 more random sites, and will continue this periodically. As they begin the second wave, they are expanding the set of social-emotional motivational variables, as some of us recommended. The battery is a process. No one will ever be able to mandate a set of measures for school readiness.

I also recommend examining, which is critical and also has a national imprimatur, the eight goals in the Educate America Act. They are driving educational reform at the federal level in this country, and the first goal is school readiness. Each goal has a panel, and Sharon Lynn Kagan, president of NAEYC, was the co-chair of the panel on school readiness. They have narrowed school readiness into five subgoals, which include health. A final source is the Head Start School

Transition Project. It studied 31 sites around the country, and provides another example of a set of measures that have some imprimatur as being carefully selected.

Some scholars do not agree with the concept of school readiness. Children go to school, and schools have to be ready for children—not children ready for school. One thing that worries me, especially under the impetus of Governor George W. Bush, is the emphasis on literacy. Traits such as curiosity and a sense of efficacy are also important in determining human behavior. There is a national mentality, evidenced by Congress in the 1998 Reauthorization, which focuses on literacy. Congress mandates that children leave Head Start knowing 10 letters. The idea of micromanaging local centers, which have always prided themselves on their local autonomy, at the level of Congress is alien to what Head Start was supposed to be.

Whitehurst: One important issue is that the measures that are appropriate for determining the national impact of Head Start are not necessarily the same measures that are appropriate for a local Head Start center to use to determine whether their children are showing progress. We need a measure of development that could be used for evaluation at the local Head Start level. A standardized, one-time test that might be given by a researcher is not necessarily of great use to a local Head Start center. While the results from such standardized assessments may be quite reliable when considered at the regional or center level, they probably are less reliable at the individual child level. We need to make that distinction.

In terms of literacy, we have data that suggest what children most need to know if they are to survive in the schools. We can increasingly assess that reliably at the Head Start level. Certainly literacy is not the end-all, but being prepared to learn to read is like having your parachute on before you jump out of the plane. It is a critical readiness skill to which Head Start ought to eventually be held accountable as well as kindergartens around the country.

Question: If there is not an agreed-upon set of outcomes for school readiness, how will this study tell us anything except that Head Start is better than nothing?

Whitehurst: We are likely to find from this study, if it is well conducted, that there are areas of weakness and strength in terms of the program that is typically delivered by Head Start. We know already from the FACES study that there is practically no change in the most important domains of emergent literacy over the Head Start year. Currently children are not learning much in a typical Head Start program in this particular domain. In other domains, for example health, there are clear, positive changes as a function of Head Start. We may learn from this study something more subtle and graded than whether Head Start works or does not work. We may learn that there are areas in which Head Start is doing well, and areas in which Head Start could do a better job.

Also, the program comparisons are going to be interesting. What is the effect of Head Start compared to family child care or a state-sponsored prekindergarten program? What are the differences in full-day versus half-day programs? What happens to children as they move through the day and spend their morning in a Head Start program and their afternoon elsewhere?

Question: My question pertains to the setting of the experiments to be done. Is there going to be a full range of variation, such as degree of concentration of poverty, rural versus urban settings, and so forth, in terms of the sample?

Whitehurst: Depth of poverty in communities is one of the areas that is to be targeted in the stratified design. The recommendations of the Committee identified the variables that had to be represented in sufficient number to conduct a clear analysis. The stratifying variables are region of the country, race, ethnicity, language status; urban or rural; and depth of poverty in communities. Other variations will not be explicitly represented as stratified variables in the design, but will be represented at some levels as variation in the programs selected, and will be examined to the extent possible in a post hoc fashion.

Those variables are 1-year or 2-year experience for children; program options, such as center based versus home based versus part day versus full day; and auspice, including community action agencies, public schools, and nonprofit organizations. Community level resources will also be examined, including alternate child care options for children from families with low incomes, the nature of the child care market, and the labor market in the community. Others will emerge too.

Lois-ellin Datta: Evaluation has always been important in Head Start. We are a work in progress. In almost all the studies done with Head Start the field of evaluation has learned much from Head Start's courage, boldness, and determination. I sit here in great awe of Head Start's courage and the contribution that this study will make. In a study that uses control group design, one area that has sometimes been understudied is an in-depth, profound understanding of what is happening to the control group. How will this be addressed?

Zigler: It is imperative that this study take a hard look at the comparison group. We have to be careful with the word control. There is a difference between a quasi-experimental design in which not a control but a comparison group is equated on as many of the variables as possible. Unfortunately, in that kind of design, we do not know what all the variables might be. So the word control is typically limited to a random assignment study where people are randomly assigned to an experimental and control group.

I voted for this design, along with my colleagues. Because of the control group problem, there are diffusion effects. There is a growing body of literature that is saying that these complicated comprehensive interventions need a different research design than our standard random assignment design. There are invariably rebuttals because it is like attacking the Bible to attack a random assignment design. This study will help inform that ongoing debate.

Question: In early childhood, parents and family have tremendous influence on the development of children. In fact, Head Start recognizes parents as the primary educators of their children. Do you think that random assignment sufficiently controls for this important variable, and is it to be considered in the study?

Whitehurst: Parental involvement is one variable that is to be examined, although we are not sure exactly how that will be examined. But there was certainly an appreciation among the Committee members that we needed to get not only at characteristics of centers and outcomes for children, but also the family context in which these emerge.

Will random assignment take care of variations in these issues? It will, in the sense that it takes care of all variables. If the only systematic difference between the groups is whether they are attending Head Start or not, then there will be the same variable of quality of family environments among children in the control condition as children in the intervention condition.

Some evidence from preliminary work done by the Head Start Quality Research Centers (QRCs) indicates that we need to be concerned about what parents who opt into the study and then get assigned to the control group do. The University of North Carolina QRC found, for example, that a high percentage of the families went to the next community to enroll their child in Head Start because there were not any other options. There are practical problems to random assignment.

Question: Is there any variable built in for the educational level and training of teachers?

Zigler: The study cannot stratify for every variable of interest. Teacher education and training is a critical issue in Head Start, precipitated by Congress who ordered by legislative mandate that by the year 2002, 50% of Head Start teachers will hold an Associate's or Bachelor's degree in a field related to child development. No one knows what will happen to the thousands of people who hold a Child Development Associate certificate (CDA) that Head Start produced. Head Start's tradition of taking parents and moving them into this kind of work is also threatened. To address this issue, we can conduct post hoc analyses. This is an empirical question. How do the children's outcomes compare for those who have had a teacher with a CDA versus a Bachelor's degree? The FACES data, which will be available for secondary analysis in about 2 years, can also address this issue.

ACYF Research, Demonstration, and Evaluation Branch

Dimensions of Program Quality That Foster Child Development: Reports From Five Years of the Head Start Quality Research Centers

CHAIR: Marita R. Hopmann

PRESENTERS: David Dickinson, Aline Sayer, Kimberly Sprague, Martha Abbott-Shim, Richard George Lambert, Lawrence J. Schweinhart, Donna Bryant

Posters

Educational Development Center, Inc.

- **Classroom Factors that Foster Literacy and Social Development in Children of Different Language Backgrounds**
  David Dickinson, Kimberley Sprague, Aline Sayer, Candy Miller, Anne Wolf, Nancy Clark

The New England Quality Research Center investigated the impact of varied aspects of classroom quality on the language, literacy, and social development of children from diverse language backgrounds. We assessed children's developmental status in the fall and spring using both direct child assessment and teacher rating scales and gathered information about classroom quality in the winter months using independent observers to assess the learning environment, caregiver interaction, and supports for literacy. Over 2 years, we collected information on 393 children across 72 classrooms. Of these children, 31% came from Spanish-speaking homes. To examine the impact of multiple dimensions of classroom quality on children's development, we used multilevel models to insure accurate estimation of the effects of classroom measures. Between 15% and 20% of the variation in children's spring outcomes was attributable to between-classroom factors, a finding that is consistent with other studies of school effects. We controlled for child language background, gender, age, and fall scores. Our measures of quality accounted for significant amounts of variance in children's spring social, language, and literacy outcomes. We conclude that:

1. Classroom quality has a larger impact on language and literacy outcomes than on social outcomes.
2. It is important to consider multiple aspects of quality because various dimensions of classroom quality have differential impacts on child outcomes.
3. It is important to consider children's language background in any assessment of classroom quality, because it is a strong predictor of children's performance on both social and language tasks.

Georgia State University

The Impact of Classroom Quality on Children's Cognitive, Language, and Social Development

Martha Abbott-Shim, Richard George Lambert, Frances McCarty

The Georgia State University Research Center on Head Start Quality has worked in partnership with three Head Start programs: Concerted Services, Inc. (Waycross, GA), Ninth District Opportunity (Gainesville, GA), and Jefferson County Committee on Economic Opportunity (Birmingham, AL). The impact of Head Start classroom quality on children's language and social development has been the focus of our research from the spring of 1996 through the spring of 2000. The quality of classroom teaching practices was assessed using the *Assessment Profile for Early Childhood Programs: Research Edition II*. The findings from HLM analyses indicate that when teachers demonstrate higher quality individualizing practices: (a) children tend to do better on measures of cognitive development, (b) younger children tend to perform similarly to the class average, (c) children's age is less of a predictor of positive social behavior, and (d) maternal depression is less of a predictor of disruptive behaviors in classrooms. When teachers demonstrate higher quality scheduling practices, children whose mothers are depressed tend to be less disruptive in classrooms, and children generalize the positive social behaviors that they learn in Head Start to other settings. When teachers provide higher quality learning environments, children have fewer problem behaviors reported by parents.

High/Scope Educational Research Foundation

Do Teachers or Observers See Children's Development Better?

Lawrence J. Schweinhart, Sherri Oden, Theodore Jurkiewicz

The High/Scope Child Observation Record (COR) shows promise for evaluating the effects of Head Start programs on children's development, but it may be debated whether it is better for it to be completed by outside observers or by teachers. Outside observers focus exclusively on observation for a limited amount of time, release teachers from this duty, and presumably have no vested interest in the results. Teachers, on the other hand, spend plenty of time with children during which they can observe children's development, are expected to intervene in and create opportunities for all aspects of children's development, and can guard against vested interest by anchoring ratings with evidence. This study adds empirical information to this debate by examining, in Head Start classrooms, the reliability and validity of COR data from observers with COR data from teachers. Because the observer COR had substantial missing data, it had virtually no total scores, and the category scores it did have had weak internal reliability and weak correlations with other measures of children's performance. In contrast, the data from the teacher COR demonstrated strong internal reliability and strong correlations with other measures of children's performance. We conclude that when using the COR, teachers see children's development better than observers.

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University of North Carolina at Chapel Hill

■ Head Start Quality: Processes and Predictors

Donna Bryant, Ellen Peisner-Feinberg

The topics addressed by this presentation include how to measure "quality" within Head Start, predictors of quality, and the relationship between classroom quality and child outcomes. More than 275 Head Start 4-year-olds and their 61 teachers participated in the study. Measures of classroom quality tended to be somewhat correlated within broad domains (e.g., practices-type measures) but less correlated across domains (e.g., practices not related to structural). Teacher/child ratio and the teacher's Child-Focused Beliefs significantly predicted classroom quality. After controlling for children's background characteristics, classroom quality predicted children's developmental outcomes. Quality of classroom practices was related to children's attitudes toward school/perceptions of competence, problem behaviors, and developmental ratings. Closer teacher-child relationships were related to greater phonemic awareness, more positive attitudes/perceptions, better social skills, fewer problem behaviors, and better language/communication skills. Children in higher quality classrooms are doing better at the end of their Head Start year and, therefore, more likely to be ready for school when they enter kindergarten.

DISCUSSION

Marita R. Hopmann: In 1995 four Head Start Quality Research Centers (QRCs) were established by cooperative agreements. Now in the last year of their 5-year grants, representatives from each of the QRCs will present their findings related to program quality, children's outcomes, and the relationships between the two.

Martha Abbott-Shim: Our research has involved various people and places: the Georgia State University Research Center on Head Start Quality, where I am located, and our three Head Start program collaborators (with 190 classrooms and 480 children); the Frank Porter Graham Child Development Center at the University of North Carolina at Chapel Hill and its four Head Start collaborators (with 61 classrooms and 278 children); the New England Research Center on Head Start Quality, which we refer to as EDC (Educational Development Center) and its five Head Start programs (with 42 classrooms and 271 children); and the High/Scope Educational Research Foundation and its four Head Start partners (with 44 classrooms and 155 children). Our Head Start partners have been integral to this research.

In most cases, the numbers of programs, classrooms, and children assessed are those for a 1-year period. However, all the QRCs collected data over multiple years and were comprehensive in looking at programs and children.

One of the first questions that we addressed was, "What is quality?" The QRCs have used different instruments to examine quality. At Georgia State University we have administered the Assessment Profile for Early Childhood Programs four times over the 5 years. Our results show that the scheduling, learning environment, individualizing, and curriculum scale scores have improved over 5 years, whereas the interacting scale score has remained fairly stable.

All four QRCs have used the Early Childhood Environment Rating Scale (ECERS) over the 5 years. Recent ECERS data from the North Carolina site show that more than half of the 61 Head Start classrooms scored in the good or excellent range, based on aggregating the 37-item ratings made by each data collector for each classroom.

David Dickinson at the EDC site has developed and used the Early Language and Literacy Classroom Observation (ELLCO). His findings show that Head Start teachers are stronger in general early childhood practices (i.e., creating well-ordered, safe, supportive environments for children) than they are in language, literacy, and curriculum practices (i.e., engaging in interaction and providing activities that support children's development and language and literacy skills in a developmentally appropriate manner).

The next question we addressed was, "What is the impact of quality on child outcomes?" Over the Head Start year, children show growth in language, math, and cognitive abilities, based on fall-spring assessments using the Peabody Picture Vocabulary Test (at UNC), the Woodcock-Johnson Math Subscale (also at UNC), and the Cognitive Skills Assessment Battery (at High/Scope).

UNC researchers looked at the relationship between quality and children's developmental skills. A composite classroom practices score was created using the ECERS, the Arnett Caregiver Interaction Scale (CIS), and the Assessment Profile-Interacting Scale only. Correlating this composite score with High/Scope's Child Rating Scale (CRS) developmental rating scores, UNC found that higher quality classroom practices is related to higher developmental ratings by the teacher.

Development of social and mastery skills during the Head Start year also has improved. Martha Bronson at the EDC site has developed an instrument that some sites have used to examine task completion rates or mastery. This instrument looks at a child as s/he initiates a task, the strategies the child employs in approaching that task, and whether the child successfully completes the task. Fall-spring data for 364 children show an increase in the task completion rates at the end of the year.

Some sites have used the Social Skills Rating Scale (SSRS). As rated by the teachers in the fall and the spring, 200 children demonstrate an increase in prosocial, positive social skills. An examination was made of the relationship between composite classroom practices scores and SSRS problem behavior scores. Higher quality classrooms have fewer child problem behaviors. In lower quality classrooms there are more problem behaviors. UNC researchers also looked at the relationship between teacher-child closeness subscale scores (using the Student-Teacher Relationship Scale) and the SSRS positive social scores given by the teacher. Closer teacher-child relationships are associated with better social skills.

The next question examined was, "What is related to quality?" We found that, with formal education and experience, there is an indirect influence of teachers' formal education on classroom quality—through teacher beliefs. Research conducted in the first 2 years at the Georgia State site, recently published in the *Early Childhood Research Quarterly*, shows the importance of teachers continuing their formal education. This finding is especially relevant given Head Start's mandate that 50 percent of all teachers obtain their associate degree by 2001.

In addition, we found that teachers who have developmentally appropriate beliefs and practices tend to have higher quality classrooms. These data come from Diane Burts' scale on teacher beliefs (the Child-focused and Academically-oriented subscales of the Teacher Beliefs Scale). Teachers who have more developmentally appropriate beliefs tend to have higher quality interactions with children in the classroom. These findings speak to what is related to quality on the teachers' part.

In conclusion, we found that the quality of Head Start classrooms does make a difference in children's growth and development. Children in higher quality classrooms are more likely to be ready for school when they go to kindergarten and to be more successful in school. We also concluded, based on work done by EDC and others of us on emergent literacy and language, that a special emphasis is needed to strengthen language and emergent literacy skills within Head Start classrooms. The quality of practices in these content areas needs to become as strong or stronger than other practices we observed with teachers in the classroom.

Aline Sayer: I want to make some general statements about the approach that EDC has taken to address the question of the impact of classroom quality on child outcomes. We measured about 400 children in 70 or so classrooms. In terms of outcomes, we examined children's spring scores after they had been in Head Start for less than 1 year. We asked, "How is variation in children's scores in the spring related to the quality of their classroom?"

Answering that question requires two different levels of analysis. Children are measured at the child level. They are given individual assessments, and we look at the variation among children. The classrooms are measured at the classroom level. Someone observes the classroom and compiles an ECERS, ELLCO, or other type of score. These are two different levels of analysis. We need to sort out the amount of the variability in the child score that is due to child characteristics. Boys and girls enter the program in the fall with differences in social skills and cognitive development. Whether a child's dominant language is English influences the child's score, as does age. These child characteristics can explain the variation in child scores.

The important point is that classroom quality characteristics get swamped by the individual child differences. Almost all the variability in child scores is due to individual child-level differences. There is only a sliver attributable to differences between classrooms. Therefore, we chose to look at a model that separates these two sources of variation. We found that only about 15 to 20% of the variability in child scores is due to differences in the classroom. Thus, classroom quality, however measured, accounts for about one-fifth of the variation in child scores. This finding is consistent with the literature on school effects at all levels (e.g., individual achievement at the high school level). A strategy is needed for seeing the effects of differences in quality on children's outcomes. We used hierarchical linear models (also used by Georgia State) that provide a good way to partition this variation and find the impact of quality.

David Dickinson: We analyzed data collected over 2 years using the Early Language and Literacy Classroom Observation (ELLCO), a broad measure of classroom quality; the Adult Roles, a rating tool of the nature of relationships between teachers and children; and two scales from the Assessment Profile for Early Childhood Programs about the scheduling of the classroom and the nature of the learning environment. When we looked at predicting language development as measured by receptive vocabulary, we found that about 80% of the variability from classroom to classroom was predicted by the ELLCO and Adult Roles measures, a high percentage of the between-classroom variance. When we predicted literacy development using another tool that we have developed, about 65% of the variability was predicted by these measures of language and literacy.

When we analyzed the social measures, focusing on problem behaviors, we found that the extent to which the classrooms are structured accounted for about 40% of the variability. However, different measures predicted the positive aspects of social skills: the ELLCO and the learning environment subscale from the Classroom Profile.

Finally, we are beginning analyses that include the linguistic diversity of the classrooms. In our initial analyses, when we examined the impact of quality on phonemic awareness, we found no effects. But when we looked at the linguistic diversity of the classrooms, we found very significant effects of quality. Children in classrooms where only one language is spoken start out at a lower level of phonemic awareness. Children in classrooms where multiple languages are spoken start out at a slightly higher level in the fall, suggesting that exposure to multiple languages may have beneficial effects on phonemic awareness. As classroom quality improves, the phonemic awareness scores of all the children are better and those children who have limited ability to have other languages spoken around them begin to catch up with the more advantaged children.

Richard George Lambert: The main method employed for most of our investigation was classroom contextual models using 2-level hierarchical linear modeling. The first-level model deals with child and family background variables and how they predict child outcomes. The second-level model consists of classroom contextual variables, teacher characteristics, and quality measures about the classroom and how they predict the average functioning of the children within that classroom. Our findings echoed much of the literature: About 15 to 25% of the variability in child outcomes is between classrooms; the rest is within classrooms. Even within a restricted socioeconomic group such as Head Start children, we still see this same pattern.

Nevertheless, some of that 15 to 25% of the variability, depending on the child outcome measure, can be tied to teacher characteristics or classroom contextual variables. On the classroom contextual side, we found some effects for class size, as other research has shown. We also found that the mean income of the children's families has an effect. This suggests that, for some teachers with a higher concentration of the poorest of the poor, it is harder to have as rich a classroom environment and perhaps as high a function in children on average. In addition, the mean functional literacy of the primary caregiver affected the level at which the child functioned.

Concerning teacher characteristics, teacher beliefs about developmentally appropriate practices was the biggest predictor of between-classroom variability. We also found effects in different places, depending on the child outcome measure, for some of the Assessment Profile quality measures, such as individualizing instruction, the learning environment, and scheduling.

We also examined some level-two-only models—or which teacher characteristics predict child outcomes, and whether they have a higher quality classroom as measured by our quality measures. We also looked at level-one-only models—or which family background variables predict child outcomes. To summarize results from the level-two-only models, teacher beliefs again was the biggest predictor of whether the teacher had a high-quality classroom. Teacher beliefs was more important than the teacher's educational level, suggesting that it is not just the degree that a teacher obtains, but how much the process of getting the degree changes or helps nurture her/his beliefs about practice.

To summarize results from the level-one-only models, we organized all the possible range of family and child background variables into other underlying constructs. A two-variable model emerged suggesting one cluster of factors related to the home learning environment, which includes variables such as reading to the child, the presence of books in the home, having a library card, and taking the child to museums. The second cluster of factors relates to social risk and includes variables such as maternal depression, exposure to violence in the home, exposure to violence in the neighborhood, and social support from other family members in the community. Creating these two underlying constructs seemed the best way to organize these background variables into constructs that would predict child outcomes.

Lawrence J. Schweinhart: The High/Scope QRC focused on the question, "Do teachers or other observers make better assessments of children's development?" We were methodologically interested in this question, and knew that Head Start directors soon would face the same question. In its continuing role as a leading social experimenter in early childhood education, Head Start is about to focus all local Head Start programs on the measurement of child outcomes. Head Start directors across the country will have to decide how best to measure child outcomes. Directors who opt for observational assessment will ask whether their own teachers and staff should conduct the observations, or whether they should hire outside observers.

We asked the question using the High/Scope Child Observation Record (COR), which has 30 items, each with a 5-level rating scale. The items are organized into six categories: initiative, social relations, creative representation, music and movement, language and literacy, and logic and mathematics. The teachers collected anecdotes for a few months; the observers collected anecdotes for three part-day sessions. The anecdote writer then assigned the child the highest level represented by an anecdote.

The debate as we framed it in our own minds centered on the validity of teacher observations. Teachers are in the classroom and can continually observe the children, whereas the observers are there only for a brief period of time. However, observers presumably are above the kind of vested interest that teachers are going to have, particularly if a program evaluation is ongoing. It may always be true that teachers have strong feelings about different children. But the stakes are higher if the question relates to teacher evaluation, and that question is going to be answered in part with the observational data. We can hedge that issue by focusing on anchored ratings and having teachers learn to make sure they have an anchor of solid evidence in order to give a child a particular score. Nonetheless, that issue will always be present with teachers.

Data collected from the Head Start sample showed that, with respect to alpha coefficients of internal consistency, the COR completed by teachers was a very respectable .84, while the COR completed by observers was only .47. With respect to the various measures of validity, that is, the relationship between the COR scores and other measures of child performance, we looked at additional correlations. Examining the COR category of social relations, we found a strong .64 correlation between teacher ratings of school readiness and the COR completed by teachers. These were both teacher ratings so that is not surprising. But there were also correlations of .22 for vocabulary and .28 for cognitive skills, demonstrating that the teacher COR was working well. In contrast, the correlations with CORs completed by observers were only .13 for both school readiness and vocabulary and .31 for cognitive skills. The correlations with the other five COR categories were fairly low in the CORs completed by observers.

The underlying reason for this became clear: The observers were not able to collect enough information to complete a number of items. The item with the least data was arranging materials in graduated order. A child cannot be rated on that item without graduated materials (e.g., pieces of paper) for him/her to arrange in graduated order.

These results have led us to think of two different ways of dealing with CORs completed by observers in the future. One is to supplement it with information from the teacher. For items with incomplete information, the observers would ask teachers, "Have you seen this happen with this child in your classroom?" The other idea is to have active observers who would bring materials for those items they might otherwise be unable to complete.

The main conclusion is that, using the High/Scope COR, teachers are better at seeing child development than observers. Teachers' ratings are more complete, reliable, and valid. Anchoring the ratings in evidence and training the teachers to use the anchors can guard against teachers' vested interest in the results.

Donna Bryant: I will discuss two of our findings. First, the North Carolina data support the Georgia State data about teacher beliefs related to classroom practices, particularly beliefs in play-based learning, which was the strongest predictor of our classroom practices composite. However, we need to figure out what that means in terms of hiring practices. Unlike the Georgia State finding that teachers' education traces its route to quality through classroom practices, we found that teachers' beliefs are related to practices, not education or years of experience. Furthermore, in examining classroom quality as measured by the teacher's reported relationship with the children in her class, with a stronger, more positive relationship being a sign of quality, none of our typical predictors—years of experience, education, or beliefs—predict that relationship.

What are the implications of findings for hiring practices? Head Start puts much effort into training and technical assistance and improving teacher skills and increasing educational requirements. We should give some thought to how we can use our data to inform the selection of teaching staff by Head Start administrators.

Secondly, all the QRCs used the same parent interview. We have the same parent interview data on nearly 1,000 families across our sites. We measured parents' involvement with their child at home and in the community (in the fall and the spring) and parents' self-reported involvement in Head Start (only in the spring because parents are not yet involved with Head Start in the fall).

Families that are highly involved with their child in home and community activities in the fall are likely to be highly involved in the spring. But over and above that, families that are more involved over the course of the year with Head Start are more likely to be involved also in home and community activities with their child. So, as hard it is for Head Start to get and maintain parent involvement, it does seem to have a benefit.

AUDIENCE COMMENTS AND QUESTIONS

Question: How were teacher beliefs measured?

Bryant: Several years ago for a study of kindergarten in North Carolina, we took the Developmentally Appropriate Practices Green Book and created a measure of belief in structure, belief in play, belief in obedience, and belief in child choice. That factors basically into two scales. We find that the play-focused scale is a strong predictor of classroom quality.

Abbott-Shim: We have used Diane Burts' measure called Teacher Beliefs, which has two scales: Teacher Beliefs and Instructional Activities. That measure also was derived from the Developmentally Appropriate Practices, first edition. It has been used extensively in kindergarten research.

Dickinson: We have a measure we have not reported on yet which is teachers' beliefs about supporting children from linguistically diverse backgrounds. The measure was developed by Patton Tabors at the Harvard Graduate School of Education.

Question: Can we assume that teacher beliefs are usually translated into certain instructional practices? Many people can say, "I believe in this "and "I believe in that" but not necessarily translate those beliefs into practice.

Lambert: That is a good question. First, remember that the outcome measures we used to form the composite of quality were observational ones. We had external people observing the practices. It was not self-report. The beliefs were self-report, as you point out. Second, the Diane Burts scales that measure the two factors of practices and beliefs have, within each, an appropriate and inappropriate scale. The inappropriate belief scale is much more discriminating between high-quality and low-quality classrooms because much of the social desirably effect is taken up by the appropriate scale (i.e., teachers agree with the good practices). But with bad-practices items mixed in, the poorer-quality teachers at times get in a response set, continue to agree, and cannot distinguish between the inappropriate and appropriate practices. However, the teachers with the more developed belief systems can distinguish and will disagree with an inappropriate belief item. We use the inappropriate scales in all the models, but not the appropriate scales.

Question: In a summary of the forthcoming report, "Educating our Preschoolers," issued by the National Academy of Sciences, the first recommendation is that every group of children age 2 to 5 should have a baccalaureate-degreed, qualified teacher. What is your comment on that?

Schweinhart: The High/Scope's training of trainers evaluation found both (a) a relationship between teachers' education and program quality in child development outside of Head Start, but (b) within Head Start the connection was mostly with in-service training, which was interesting. However, if there is no variance, a researcher will not find the effect, which might be the issue. Certainly many studies indicate a strong connection between teacher education and program quality.

Bryant: For a long time, while North Carolina's variance in teacher education in Head Start was small, there was not much effect. But now we do have variance and are still not getting the effect. Maybe it is because Head Start is a unique sample. Researchers get the effect in these larger national studies with a much wider range of classrooms, children, and teachers than in

Head Start. Now about 50% of North Carolina Head Start teachers have a baccalaureate degree. We have many more such teachers, and our finding puzzles me.

Lambert: The issue is what happens in the degree programs. We all have a responsibility to be advocates for people who are going to get degrees associated specifically with early childhood.

Comment: Many degree programs are not making that connection between theory and practice. However, in good early childhood programs and Head Start programs with extensive in-service training, that dimension often exists, which is the critical link.

Question: How did you control for child maturation?

Bryant: Three or four of the measures used in common across our sites have age-standardized scores so when we look at gains, the child's age is taken into account. However, our phonemic awareness measures are not age-standardized, so we enter age in the model. That is the difference in how the analyses are done using those two types of variables.

Question: Dr. Dickinson, you mentioned that there was a differential relationship between classroom quality or classroom factors and prosocial and problem behaviors. I found a similar relationship in my data where the classroom practices were predicting disruption but not predicting play interaction. Could you address how different classroom factors may lead to prosocial but not disruptive behaviors, and vice-versa? Is it related to a greater teacher focus on disruptive behaviors?

Dickinson: My hypothesis is that we find the improvement in social behaviors based on the scales that measure the extent to which a teacher is implementing a rich, engaging, and interesting curriculum. The children simply are interested in more productive ways and are not bored. I also am doing an intervention in which we provide a for-credit course for teachers and are looking at its effects. We are finding effects, mostly related to language and literacy outcomes, but also teacher-reported changes in social behavior. Again, I think it is because the children are engaged. Their environment is fostering social development.

The sort of suppression of problem behaviors is predicted by a different measure, a tool that measures the extent to which a classroom is structured and ordered. We need to think differentially about the kinds of experiences that support prosocial development as well as avoid problem behaviors.

Lambert: If I had to list the five most disruptive students ever in my classes, I could do it right away. If I had to list the five most compliant students I have ever had, I could not. Teachers are sensitive to disruptive behaviors, maybe even more so than parents. There may be some kind of measurement artifact occurring. We have similar results to what you found. We used a measure of social behavior with prosocial and disruptive and compliant measures, and there were differential effects by the measure.

Question: Is there an inverse relationship between classrooms that fostered positive social skills and classrooms that fostered literacy and language development?

Dickinson: Yes, the measure of the scheduling of the classroom showed strong effects. It did make for less problem behaviors. It also made for less growth on our language and literacy measures. We have not yet had a chance to look at those results in detail. It might be that some teachers are more focused on creating an orderly environment than on providing stimulation for language and literacy growth.

Question: In terms of teacher practice in education, did you distinguish between those who were educated and then went into practice, those who received in-service training as they were practicing?

Abbott-Shim: Yes, we did with the education. Teachers reported on their own education and the data were not as clear as they possibly could have been, but we did not see a relationship with quality. We divided teachers into those with 13 years of education (a high school degree and 1 additional year or a certificate) and those with a higher education level than that, and did not find a significant relationship with quality.

Bryant: Why do you ask the question? What is your theory on that?

Comment: It is very difficult to change inappropriate practice, because teachers practice for several years, and then attend college or in-service training to try to turn around that behavior. I wondered if there were any differences related to the sequences of educating and practicing.

Bryant: The timing of teacher training and education and connecting what is learned with daily practice in the classroom is a good point. That would lead us to ask our education questions with more detailed follow-up questions.

Comment: I also hope that someone will examine not just level of education in terms of years, but also how much of that is directly related to child development, specifically preschool child development.

Bryant: Many of us have tried to do that and those are incredibly hard questions to write and get accurate data, especially if it is based on retrospective self-report. A prospective study is needed to track that.

Head Start Family and Child Experiences Survey (FACES)

CHAIR: Louisa B. Tarullo

PRESENTERS: Nicholas Zill, Gary Resnick, Robert O'Brien, Mary Ann D'Elio, David Connell, Michael Vaden-Kiernan, Ruth Hubbell McKey

Louisa B. Tarullo: It is our pleasure to share some of the latest findings from the Head Start Family and Child Experiences Survey, known as FACES. Head Start's ultimate goal is to enhance the social competence of children from low-income families. For the 5-year-old child coming to the end of the preschool period, a key test of social competence is how well he or she functions and adjusts to the demands of kindergarten and elementary school. At times, the term "social competence" is confusing to people. It might be clearer if we defined it simply as "competence" or "school readiness."

A child's social competence is supported by enhancing children's healthy growth and development, by forming partnerships with parents as the primary nurturers of the child, and by providing comprehensive quality services to children and families. The Head Start Bureau has long been collecting agency-level process data about the functioning of the Head Start program through monitoring, annual program information reports, and so forth. FACES marks the first time we are starting to examine child and family outcomes directly and to link them with program quality.

It is important to make sure that the kinds of outcomes are the most appropriate ones for preschool children. Head Start and the FACES study seek to take a comprehensive view of what it takes to help a child become ready for school. These objectives are based on the guidelines of the National Education Goals Panel. The view encompasses measures of health, physical, social, and emotional development, motivation to learn, as well as development in language and cognition. It is a whole child view.

For the first time with FACES, which was fully launched in the fall of 1997, the Head Start Bureau has collected data from a nationally representative sample of 3,200 children and families in 40 Head Start programs. The programs were stratified on three variables: (a) the four census regions, (b) whether they were urban or rural, and (c) whether they were serving at least 50% minority families.

Data collection was designed to be multimethod and multisource. We sought to provide the best picture of the child's development. We had observations of program quality by trained assessors using standardized measures. We had comprehensive interviews with parents and program staff. We had direct assessment of the child, standardized scales that were filled out by parents and teachers, and observations of the child at play during the course of the Head Start day. We followed the children through 1 or 2 years of Head Start experience and then into kindergarten. This spring we followed them into 1st grade.

FACES is conceived of as a periodic regular data collection in order to respond to legislative mandates in the Government Performance and Results Act (GPRA) as well as to the need for data on Head Start quality for continuous program improvement. Thus, we are launching a new round of FACES starting in the fall of 2000, called FACES 2000. The information that we have to date is just the beginning of FACES.

Nicholas Zill: I am going to focus on language development and literacy in Head Start, topics which have received much attention given recent congressional mandates. I will mostly focus on program quality and program characteristics and how they relate to literacy, as well as how home literacy activities relate to children's emerging literacy. I will address three questions: (a) Are children making progress in literacy development? (b) How does literacy development relate to the quality of the centers? and (c) How does literacy development relate to children's home environment?

FACES employs a broad range of measures to gauge children's development in all domains. The language and literacy measures include: (a) the Peabody Picture Vocabulary Test (PPVT), a measure of word knowledge; (b) the Letter-Word Identification task from the Woodcock-Johnson Pschoeducational-Revised battery, a measure of decoding skills; (c) the Dictation task from the Woodcock-Johnson, an assessment of early writing skills; and (d) a print familiarity task, which involves reading a book to children and asking them questions about print and comprehension questions. The PPVT and Woodcock-Johnson measures have national norms.

The battery also includes program quality indicators, such as: (a) the language subscale of the Early Childhood Environment Rating Scale (ECERS), which looks at the quality of language activities in the classroom and the interaction between teachers and parents with respect to language development; (b) the child-adult ratio, which is a measure of how much individual or small group attention the child is able to receive; and (c) the Arnett Rating Scale, a measure of the quality of the interaction between the lead teacher and the child. We also used baseline performance at both the center level and the child level as predictors for the spring score and for the gain score.

FACES found that the majority of children entering Head Start have literacy skills below national norms. On a scale in which 100 is the norm, with a standard deviation of 15, 63% of Head Start children are below the standard score of 90 in word knowledge at the beginning of the year, and 71% are below the standard score of 90 in early writing skills. The Head Start children make gains in word knowledge and writing skills during the course of the Head Start year. The percent with a standard score of 90 and above increases from 37 to 47% and the percent with writing skills in that range, 90 or above, rises from 29 to 39%. While children continue to score below the norms at the end of Head Start, they make significant gains.

Interestingly, the gains are not across the board. There are no gains in letter recognition or book knowledge. Also, the children who enter with lower skills make greater gains. The top quartile of children in Head Start is at the national norms when they start Head Start. The bottom quartile is substantially below the national norms with standard scores ranging from 65 to 82, which is more than two standard deviations below the national norm. Even though there is an average gain of about 4 points in vocabulary and writing, for the lower quartile the gain is substantially larger—10 to 13 points, close to a full standard deviation. For the children who were in the top quartile, however, there is virtually no gain compared to national norms.

A different picture emerges in letter-word identification. None of the groups makes any advances in terms of letter recognition skills compared to national norms. In math, the lower quartile does make a significant gain, but the overall change and the change for the highest quartile are not significant.

What about variation across centers? Many people believe that there are high quality Head Start programs and poor quality Head Start programs, and children make progress in the high quality programs but not in the poor quality ones. In fact, while there are variations in quality, we found in FACES that most Head Start programs are in the good range. The range of variation is relatively narrow. However, there is a substantial amount of socioeconomic variation across Head Start programs, which needs to be considered.

At the beginning of the program, about 29% of the variance in children's vocabulary scores is across centers, which is a substantial variation. By comparison, the letter recognition variation was less, about 20%, which is still significant. Interestingly, the variation in word knowledge was linked to the socioeconomic characteristics of the center. Centers with higher proportions of nonminority pupils tended to have higher average vocabulary scores. The variation across centers in word knowledge diminished by the spring, indicating a leveling effect of Head Start.

From fall to spring, variation in vocabulary decreases among centers from 29 to 20%. There is more variation within the center and less differences across centers, indicating a leveling effect of Head Start. The same is not true for letter recognition, where there is about 20% of variance across centers in the fall and about the same, 19%, in the spring.

Our model for accounting for variance is good. Even in the fall, about 45% of variation in vocabulary scores is accounted for by our model. This improves when we include the children's baseline performance in the spring. We are able to account for 75% of the variation across centers in vocabulary scores and about 60% of the within-center variation. The model is less successful with letter-word recognition, in which we are only able to account for about 4% of the across-center variation and about 8% of the within-center variation. However, that also improves substantially when we include the baseline performance of the center and of the child, with the predicted variance increasing substantially to 29 and 35%, respectively.

What center qualities predict scores? Centers with higher initial scores have higher scores in the spring. This is the most powerful predictor. However, the gain in average scores is negatively related. In other words, particularly in word knowledge, there is a leveling effect, such that the centers that were further behind catch up more than the ones that started relatively high, but the rank order is still the same. Also, centers with better quality language activities have higher word knowledge scores, and that is true in the fall and in the spring, even when the baseline performance and centers with lower child-adult ratios are controlled for. These same qualities were not as significantly related to letter recognition, however.

Basically, in terms of predicting in the fall, the spring, and the gain, the proportion of nonminority children is related to the scores in the center. The average child-adult ratio and the ECERS scores are related with smaller group size associated with higher scores. Centers with higher quality language activities are associated with higher vocabulary scores. With gain scores, that relationship becomes negative, indicating that the centers with higher scores did not make as much gain. However, the quality indicators continue to be significant.

It is a different picture with letter recognition. We are not able to account for much of the variance. Neither the socioeconomic characteristics nor the quality indicators account for much variance in the fall. However, in the spring, the previous score is quite significant, and the centers that serve families with relatively high income tend to make more gains in this other skill area.

I will quickly summarize the results for home literacy. At program entrance, Head Start parents are comparable to other low-income families in the frequency of reading to their children and other home literacy activities. We were able to compare Head Start families with a national survey called the National Household Education Survey (NHES), which asked similar questions. About 38% of Head Start parents reported reading on a daily basis to their children, about 29% reported reading several times a week to their children, 26% reported reading once or twice a week, and 7% reported not reading at all in the previous week. That is lower than the overall average from NHES, but it is comparable to findings from the low-income portion of the survey.

A similar picture emerges with other kinds of literacy activities, such as singing songs with the children, teaching words and letters, or taking children on errands. On a scale based on those home literacy activities on a weekly and monthly basis, the Head Start scores are lower than the overall scores for a national sample, but are comparable to a low-income sample. There are gains in home literacy activities. Although not large, they are statistically significant. On the other hand, the home reading activities do not change significantly. There is some reduction in the proportion of parents who do not read at all to their children and a slight increase in the proportion that read three or more times a week to their children. There is a relationship between the home literacy activities and children's gains.

Findings from FACES have several implications for Head Start. Head Start children make gains in word knowledge and early writing skills, but it seems that Head Start could be doing more to nurture children's language development and emergent literacy. In particular, there is a large discrepancy between the gains in word knowledge and early writing skills and letter recognition. It seems advisable for Head Start to bolster classroom activities on letter recognition, phonemic awareness, and print familiarity.

It is also striking that children who enter Head Start at the national norm do not make large gains. Another possible prescription would be to provide appropriate activities for children who enter the program already at the national norms. Head Start programs also could be doing more to discover parent activities to nurture emergent literacy at home and to encourage them to do more.

We found that the quality of language activities and individual attention to pupils were associated with greater gains in word knowledge. However, variations across Head Start centers in pupil literacy activities are due more to family background factors than to differences in program quality. Thus, nearly all Head Start programs could improve the quantity and quality of their literacy activities. It is not a question of variation in program quality—most programs are of good quality. Nonetheless, most programs could be doing more to bolster literacy activities.

Gary Resnick: To complement measures of cognitive and language development and expand the assessment of children's school readiness, FACES employed an innovative method to measure children's social development: observations of individual study children engaged in play with peers.

A preschool child's ability to initiate play with peers, to enter ongoing play groups, to resolve conflicts with peers, and to engage in complex pretend or dramatic play with other children are critical indicators of social development. In fact, social pretend play is considered the highest form of play in which a child can engage because it requires a host of both cognitive and social skills. The child must be adept at using symbols by transforming ordinary objects into pretend objects, the child must be able to communicate these "shared meanings" to a partner, and the child must be able to cooperate with this partner in an interaction that involves identifiable and mutually acknowledged themes or scripts.

In FACES, the observational measure chosen to assess children's social play was an adaptation of the Howes Peer Play Scales, which have a relatively long history of use in studies involving toddlers and preschoolers in child care, home-based, and Head Start settings. The Howes Peer Play Scales have also been used previously in several national studies of early child care.

The Howes Peer Play Scales were completed during specific periods of the Head Start day, such as free play, free choice, learning centers, and outdoor play, when the children were not engaged in teacher-directed or routine activities. Up to six children in each classroom were observed for alternating 20-second intervals until that particular free play session ended. A minimum of 30 20-second intervals for each study child was required. There were 2,288 children from 308 classrooms in the fall of 1997 observed using the Howes Peer Play Scales.

There are four levels of social play assessed by these observations, representing children's social abilities in play with peers: (a) uninvolvement, (b) noninteractive play, (c) simple interactive play, and (d) pretend play. Uninvolvement is assigned when the child is not engaged in play either by him/herself or with others. The child who is given this code is either not playing, is not focused on any activity, or is watching other children play without participating directly in the play. Noninteractive play is a lower level of social play that consists of the target child playing alone or in the company of one or more peers in the same area (i.e., the block area), but there are no interactions between children. Simple interactive play is assigned when a child is interacting with one or more peers as part of their play by taking turns in a game, showing nonverbal interactions, or through playful conversation. Finally, pretend play is scored when a child is in a pretend or dramatic play situation with at least one peer, where each child takes on an implicit or explicit role within the dramatic situation, such as pretending to be a teacher or in a doctor's office.

At the beginning of their Head Start year, children spent approximately 88% of their playtime engaged in play behaviors rather than looking at others play or being unoccupied. The children spent the bulk of their playtime involved in noninteractive forms of play, such as playing by themselves or playing in the presence of peers (in parallel) but not interacting with them. About a third of the children's play was spent interacting with peers, either in simple interactive or pretend play. Head Start children were observed for 7% of their playtime in pretend or dramatic play. From the fall to spring, the percentage of time that children spent uninvolved significantly decreased from 7 to 4%. The children significantly increased the percentage of time spent in simple play interactions with peers from 26% of their time of their time in the fall to 34% in the spring.

These peer play data were compared to those reported in previous research to assess the validity of this measure for Head Start children. In one study involving 87 3- and 4-year-old children from the National Child Care Staffing Study sample, the scores on the Howes Peer Play Scales are comparable in some ways to the FACES data. Compared with the Howes and Matheson data, the Head Start FACES children spent about the same amount of time in noninteractive and simple interactive play, but less time in pretend play. Since pretend or dramatic play relies heavily on language ability, and the children in the FACES sample are behind the national norms for language, particularly in the fall of their Head Start year, it is not surprising that the children in the FACES sample spent somewhat less time engaging in this type of play.

Children who spent more time in uninvolved, nonplay tended to be in lower quality classrooms. These classrooms were marked by lower quality of language-related activities, fewer stimulating learning materials present in the classrooms. The classes were larger and had teachers who were rated as being less sensitive and responsive. Children in classrooms rated higher in learning environment materials spent more time in simple interactive or pretend play and less time in noninteractive play.

These results suggest that higher quality in Head Start classrooms is related to more highly developed social play. The strongest relationships occurred for the lowest level of play (uninvolvement). This points to the possibility that classroom quality below a certain threshold has an effect on children's choices during free play situations—whether to play or not. Above this threshold, varying levels of quality may not translate into more complex forms of play.

Children who were rated by the teacher as having more behavior problems spent more time in noninteractive play. Children who were rated by the teacher as having few behavior problems spent a greater proportion of their play time in interactive and pretend play. Children who were rated higher in social skills by the teacher spent significantly more time in simple interactive and pretend play. Children who were rated lower in positive social behavior spent significantly more time in noninteractive play. These findings support the utility of the Peer Play Scales for providing independent and corroborative evidence concerning the children's social development in Head Start.

Mary Ann D'Elio: I will describe the Head Start family and child characteristics and the environments in which the children are being raised. We interviewed the primary caregiver of the Head Start child. Nearly all of these respondents were the parents, and about 88% were the mothers. Interviews were completed for 3,156 families in the fall of 1997, and 2,688 follow-up interviews in the spring of 1998. About 17% of the families were interviewed in Spanish, and less than 1% were interviewed in another language with the use of an interpreter.

Head Start serves a diverse group of children. About 37% of the children were African American, 28% were White, and 24% were Latino. About 40% of the children were 3-year-olds, and there was a fairly equal split between boys and girls. Nearly all the children (98.3%) were born in the United States.

Through parent report, we examined the disabilities and health problems reported of the

Head Start children. More than 16% of the children were reported to have one or more disabilities. The largest category was language or speech impairment (12%). The next category was emotional behavioral disorders (2.4%) and then learning disabilities (1.15%). These caregiver reports are generally slightly higher than the data reported on the Program Information Report (PIR), an annual survey submitted by Head Start programs. However, the PIR data include only children who have been determined by a multidisciplinary team to have one or more disabilities, whereas the FACES reports are the parents' perception of their child's disability.

Most of the respondents were young: 59% were in their twenties; 29% were in their thirties; and 9% were 40 or older, mostly grandparents or foster parents. A small percentage of parents, about 2.4%, were under 20 at the time of the interview. Most of the primary caregivers (72%) had at least a high school diploma or a GED. About 35% had attended some college, 9% had an associate's degree, and 6% had an advanced degree. Between the fall of 1997 and the end of the Head Start year, about 9% of the primary caregivers reported completing a license, a certificate, or a degree.

Primary caregivers were equally likely to be married as single. Mothers were present in 93% of the households, and fathers were present in 44% of the households. One or both of the parents were present in 96% of the households, but both parents were only present in 43% of the households. Households had an average mean of 4.47 members, ranging from 2 to 15 members. A large percentage of children (43%) are living in homes where close family members left or moved into the home during that year—frequently the arrival or departure of the father or father figure.

More than 50% of the primary caregivers were employed. Over the course of the program year, unemployment went down, and employment went up. This finding is not unexpected given the context of these findings in the midst of the welfare reform and a robust economy. Income, as defined by FACES, is based on household, rather than family, income and includes sources that are not accounted for in the Head Start eligibility criteria. Even so, 42% of families reported incomes of less than a $1,000 a month. About 85% of the households received some supplemental sources of income. Some 30.6% of primary caregivers reported receiving Temporary Assistance to Needy Families (TANF) in the fall of 1997, which was consistent with the national trend. In the spring, that number decreased, with only 25.6% reporting use of TANF. Once again, in the context of welfare reform, this trend is expected.

FACES also collected data on child care in addition to Head Start. About 49% of the children were in child care before enrolling in Head Start. Once they enrolled in Head Start, only 28.1% of the children were in child care in addition to attending Head Start. Of that 28%, almost 70% were cared for in settings by a friend or a relative. Only 14% were in other center-based care, and 8.5% were in family day care. Of the 28% of families using child care in addition to Head Start, 85% were employed. The children were in this additional child care about 19 hours per week.

We also asked families about their personal exposure to violence. More than 30% of the caregivers reported that they had some exposure to violence during the past year. Some 28% reported seeing nonviolent crime taking place in their neighborhood, 32% reported seeing violent crime in their neighborhood, and 25% knew someone who was a victim of violent crime in their neighborhood. The reality of violence was close to a large segment of these Head Start families. In addition, we asked about personal victimization, and 6% of caregivers reported that they personally had been victimized either in their home or in the neighborhood.

The FACES interview asked about the child's exposure to violence. In the fall of 1997, 17% of families reported that their children had been a witness to a violent crime or domestic violence in their lifetime. About 3% of the children were reported to have been victims of a violent crime or domestic violence in their life. In the spring, we decided to break out violent crime from domestic violence and ask whether the child had been exposed to or witnessed a crime over the past year. About 7% of the families reported that their child had witnessed domestic violence in the past year, and 4% reported that their child had witnessed violent crime in the past year. Less than 1% of the children had been a victim of domestic violence or violent crime during the past year.

All families need outside sources of support in raising young children. We asked the parents who provided an important source of support in rearing their children. By the spring of 1998, more than 94% of the families reported that Head Start was helpful or very helpful to them in providing support for their child-rearing. In fact, overall, Head Start was considered slightly more helpful than relatives and much more helpful than friends, other parents, religious groups, or other care providers.

We also asked the families how satisfied they were with Head Start in eight different areas. Overall, parents were highly satisfied with Head Start in all areas. The opportunities the families had for involvement with Head Start influenced their satisfaction. Parents were more satisfied when Head Start offered them opportunities for parent involvement in things like planning activities, developing curriculum materials, or contacting other parents. They tended to be less satisfied when opportunities for contact with Head Start staff were limited to things such as scheduled meetings, home visits, or informal chats when dropping off or picking up their children.

David Connell: FACES also explored the intersection between teacher practice and parent involvement. We examined three major areas: (a) parent satisfaction, (b) parent involvement, and (c) changes in family-child activities from the fall to the spring. We used analytic modeling to look at several levels of variables. Program variables included the region and the urban-rural status of the program. Teacher characteristics included education, experience, teaching certification, and in-service training. We also looked at the classroom activities teachers reported occurred in their classroom on a scale from never or almost never to almost daily or daily. We grouped the activities into categories labeled as academic preparation activities and other kinds of social or maintenance activities. We also examined family characteristics, including parents' education, ethnicity, household size, number of parents in the household, employment of the parents, and length of the parents and child's experience with Head Start.

Teachers reported offering nearly all of the academic preparation activities on a daily basis, with the single exception being letters of the alphabet, which was around 70%. That activity was the only one that significant numbers of teachers reported never offering; about 10% of the teachers said that they never taught letters of the alphabet.

We found three clusters of parent involvement. One is around classroom participation (65-90% involvement), a second is around social or parent education activities (40-55% involvement), and a third cluster involves Head Start management or involvement at the planning level (25-40% involvement). Parents whose children had been enrolled for a longer time, parents with more education, parents not currently employed, and nonminority parents reported being more involved with Head Start program activities.

In analyzing parent and teacher interviews, parents reported more involvement with Head Start program activities when teachers reported greater amounts of in-service training for themselves, particularly in the areas of family services and case management. When a larger proportion of teachers in a center reported having a preschool or elementary school teaching certificate, involvement also increased.

Although working and minority parents reported somewhat less involvement with the program, there was not a big absolute difference in the mean involvement. Although working parents engage in Head Start activities at a lower level than nonworking parents, the absolute differences were relatively small, roughly 20% of a standard deviation. Non-English-speaking parents were involved at equivalent levels to English-speaking parents. Parent involvement was not related to any program characteristics, such as urbanicity or region.

FACES also examined two kinds of activities of Head Start children with family members: (a) weekly activities; and (b) monthly activities, such as visiting a library, going to a show, or visiting a zoo or aquarium. We analyzed data by the type of family member that was involved with the child in these activities: (a) mother, (b) father, (c) other family members, and (d) nonhousehold member. Mothers were by far the most involved, which is to be expected since only half of the families had fathers in the household.

When we looked at the relationships between primary caregiver interviews in the fall and again in the spring, there were significant increases in both the monthly and weekly activities. There were greater changes reported by parents enrolled in programs in the urban areas where there may have been more opportunities, particularly some of the monthly activities. Parents reported greater changes, both in weekly and monthly activities, when teachers reported more frequent academic preparation activities in the classroom. Also, for weekly activities, parents reported greater changes when the teachers reported having received more in-service training, particularly child development training.

Robert O'Brien: One of the major goals of Head Start is to strengthen families and to encourage parents to be the primary nurturers of their children. Consequently, one of the missions of FACES has been to investigate how families work to support and nurture their children. This presentation reports on some of our early findings about fathers who are present or not present in the homes of the Head Start children. It looks at the positive and negative factors associated with having fathers in the home and, in some cases, with the fathers' involvement with their children. These data are based on the mother's report.

Less than half of Head Start children (45%) live with their biological fathers. For the children living without their father in the home, 61% were reported to have a father figure available to them, most often the mother's spouse or partner (50%) or a relative (39%). About 42% of the nonhousehold fathers never or rarely see their children, while almost 30% see their children at least several times a week. Of the children without a father in their household, 8% (or 5% of the overall sample) have no reported father figures and never or rarely see their biological fathers.

In a comparison of fathers who live in- and out-of-home, a greater percentage of fathers living in the household were reported to be working (83% versus 74%) and have at least a high school diploma or GED (68% versus 45%). Mothers were less likely to work (48% versus 56%) and household incomes were greater by almost $400 in families where a father was present. Respondents (typically mothers) reported that 45% of the nonhousehold fathers contributed to the financial support of their children and that 55% lived within an hour's drive of their children.

Whether fathers are in the household or not can have a range of potential impacts on the family. For example, it was noted that in households where fathers are not present, primary caregivers are more likely to have seen violent and nonviolent crimes in the neighborhood and to have been the victim of violent crime in their home. Of the 518 children who witnessed a violent crime or domestic violence prior to the fall 1997 interview, 73% did not have a father present in their home. Similarly, of the 87 children who were reported victims of a violent crime or domestic violence as of the fall 1997 interview, 82% did not have their father living in their home. It is unlikely that FACES will be able to determine if the fathers' absence was a likely cause of the exposure to violence or if the violence was, in fact, a factor related to the father leaving the home. In either case, the picture for this subset of Head Start children is unsettling.

We also examined the father's presence as related to the household environment. We asked mothers how helpful the father was in raising the child over the previous 6 months on a scale of not very helpful, somewhat helpful, to very helpful. Fathers in the household were much more helpful than fathers out of the household.

We also analyzed fathers' involvement in weekly and monthly activities. We hypothesized that when fathers were not in the home that other family members would compensate and increase their level of activity. Instead, when fathers were engaged in more day-to-day activities with their children in the weekly ratings, mothers also engaged in more activities with their children. When fathers engaged in more activities with the child in their weekly ratings, nonhousehold members also engaged in more activity with the children. It seemed the father helped generate some of the activities with families. We found little compensatory effect in the monthly activities in which the nonhousehold group increased their monthly activities with the children. However, again, in terms of mothers and other household members, when the father's activity increased, their activity increased as well.

The relationship of the father's level of support for the mother in raising the children with children's behavior ratings was analyzed. We found a powerful pattern: Regardless of whether fathers are in the home or out of the home, when fathers support mothers in raising their children, there is an increase in children's positive social behavior and a decrease in the problem behavior indices. While the correlations are generally low, they are all significant. In terms of fathers' activity with their children, we see the same pattern. There is a correlation between fathers who are more active with their children, whether in the household or out of the household, and positive social behavior and a negative correlation with problem behavior.

Michael Vaden-Kiernan: The two overarching goals of the FACES case study are first, to provide a more complete profile of Head Start families, their neighborhoods, and the nature of their interactions with Head Start. The focus of the case study is on the family as a whole, with the idea to describe the family's context. It is unique in terms of the overall FACES study in that the family is the unit of analysis. The second goal of the case study is to support and expand on the findings from the larger FACES study, pursue research questions independent of the larger study, and generate hypotheses for future research. The role of the case study is to be illustrative as well as exploratory.

We randomly selected three families from each site for a total of 120 families in the study. There were no statistically significant differences between the case study sample and the larger FACES sample of families on basic demographic information, including: (a) household income, (b) marital status, (c) ethnicity, (d) educational attainment, (e) employment status, (f) receipt of welfare, Medicaid, or food stamps, and (g) language spoken in the home. We followed the families for 16 months, from September 1997 to December 1998. Overall, the attrition rate for the case study was 12% (14 families).

The case study consists of four primary data collection components: (a) home visit parent interviews, which were semistructured, open-ended interviews conducted with Head Start parents regarding their families, their experiences with Head Start, and their neighborhoods at each of the three data collection points in the study; (b) home and neighborhood observations reported by the interviewers and by the families during home visits; (c) monthly telephone contacts, which provided family updates on changes in household composition, child care arrangements, employment status, health status, and Head Start participation; and (d) community agency telephone interviews regarding the amount and overall nature of collaboration between their agency and the Head Start program.

In order to identify emergent themes, both within and across families, we used two analytic approaches. The first approach was family narratives. These family narratives were an iterative process in which we integrated qualitative and quantitative descriptive data from both the FACES case study as well as the larger study. The family narratives were organized around four primary components. The themes included the Head Start family, the family's interaction with Head Start, and the family's home and neighborhood.

The following is an example of a narrative regarding a family's interaction with Head Start from a family that had moved recently to the United States:

> Gabriela hoped that Head Start would prepare her daughter Maria academically and improve her social interactions with children and adults. She also hoped that Head Start would help improve Maria's manners and reinforce good habits while helping her to learn how to behave better. For herself, Gabriela hoped to gain a

> better understanding of child development and child growth, and most importantly, she hoped that Head Start would be able to help her with child care.

Further, when asked if there was anything that she would like to see improved or changed about Head Start, Gabriela wished that they would have longer hours or provide extended day care. Transportation to Head Start is a problem for this family, and Gabriela did mention being particularly pleased that at times Head Start was sensitive to her transportation needs and that "on cold days, they give my daughter a ride to Head Start." She also explained the difficulty and importance of getting Maria to school: "For me, it's hard to find a person that will help me. In the time of cold and snow, I don't want for them to miss not one day."

The family narratives allowed us to identify family strengths as well as needs in the context of a story. They are not facts in isolation, but facts told in a context. For instance, through this excerpt, we learn that Gabriela has a need for child care and transportation driven by a third factor, her desire to have her children attend Head Start every day. This analytic strategy allows us to identify meaningful emergent themes within families. It can also be used to look at themes across families in a meaningful way.

The second strategy was content coding and analyses. We coded the home-visit parent interview, systematically organized responses, and constructed a coding scheme. This allowed us to make inferences across families. For example, in the spring of 1998, we asked families how they would describe their neighborhood, in particular, whether or not it was a good place to raise children. Some 75% of Head Start families indicated that their neighborhood was a good place to raise children or had several strengths.

In addition, through the content coding, we were able to get a sense that most families were using the same set of criteria to judge whether their neighborhood was a good or bad place to raise children: (a) safety (the presence or absence of crime or drugs in particular), (b) the quality of interactions with neighbors, and (c) the presence or absence of key social and physical indicators in the neighborhood. The four key discriminating factors in terms of neighborhood physical indicators were: (a) adolescent loitering, (b) abandoned cars, (c) graffiti or vandalism, and (d) abandoned or boarded-up buildings. Families who indicated that their neighborhood was not a good place to raise children were more than twice as likely to identify the presence of these indicators in their neighborhood.

Ruth Hubbell McKey: The Head Start Bureau has started a number of initiatives to implement the findings from FACES. One is a new family literacy initiative to train programs to implement best practices in literacy development for children and families. Head Start is also working with colleges and universities to ensure that a majority of teachers obtain associate and bachelor's degrees in early childhood education over the next few years. They are setting aside $80 million to promote education and to increase staff salaries. The Bureau is also planning a national leadership institute in educational services this fall to focus on language development, literacy, math, science, and socioemotional development. Head Start is assisting programs develop child-level assessment systems they can use to assess children's growth and learning over the Head Start year.

FACES also points to areas that local Head Start programs can address to improve quality. These are based on findings about classroom quality in terms of the strengths and weaknesses in the classrooms we observed. They are all consistent with the Head Start Program Performance Standards as well as the observational instruments used in FACES: (a) the ECERS, (b) Assessment Profile, and (c) the Arnett Teacher Interaction Scale.

Nationally, Head Start programs are doing many things well, such as maintaining balanced schedules and positive tones in classrooms, promoting parent involvement in classrooms, including children with special needs in the regular classroom activities, following good health and nutrition practices, and carefully supervising gross motor activities.

However, data show that programs could improve in several areas, including providing more culturally rich activities from diverse ethnic groups. It is important to have hands-on activities with which children can be involved, such as dolls, books, festivals, food, and customs, not just posters on the wall. Second, children's artwork and other displays need to be displayed at the child's level.

Third, programs need rich and varied dramatic play activities for children, not just housekeeping corners, but other props so that children can become involved with different occupations, such as doctor's office, post office, restaurants, and space travel. Props or accessories could also be provided in the block areas. Fourth, children need more soft and cozy areas in the classrooms where they can cuddle up with a book or a toy. Programs also need to provide separate spaces for staff to relax, work, and meet with parents.

It is also important that Head Start programs maintain their low child-adult ratios. The ratios we found are generally below the requirements. Programs are accomplishing this by including parents and community volunteers in the classroom to ensure that the assistant teacher can stay in the classroom and is not running errands or preparing food. By having volunteers in the classroom, the teachers can also be more involved with the children. FACES findings also show that programs should be recruiting teachers with college degrees and encouraging teachers to obtain more education. Areas for teacher training include the importance of sensitivity, responsiveness, and warmth and the need to encourage independence in children.

Classrooms should include more early literacy activities, such as labeling cubbies and materials on shelves and reading more books with children. Programs should focus on expanding children's vocabularies, using shape and matching games, drawing, talking about letters, captioning pictures, and writing stories about children's activities. Programs should promote children's social skills by encouraging them to follow teacher directions and rules and play cooperatively with other children, especially in pretend and social play.

What can Head Start programs do with parents? They can promote daily reading by the parents to the children, which is important. Programs can also encourage increased home literacy activities through reading awareness campaigns, providing borrowing libraries for families to check out books, and emphasizing the importance of reading in parent education activities. Programs should enhance parent involvement in the classroom through empowering and meaningful activities, such as program governance, planning activities, and making curriculum materials. It is also important for the programs to continue providing emotional and social support to the families, especially to those families that are isolated or exposed to violence.

FACES provides empirical evidence that these are the types of activities that high quality early childhood programs should be doing to help promote healthy child and family development.

Results From the National Evaluation of the Head Start Transition Demonstration

CHAIR: Mary Bruce Webb
DISCUSSANT: Edward Zigler
PRESENTERS: Craig Ramey, Sharon Ramey

Mary Bruce Webb: Our presenters are Sharon Ramey and Craig Ramey, directors of the Civitan International Research Center at the University of Alabama in Birmingham. Our discussant is Ed Zigler, a professor in the Department of Psychology at Yale University.

The Transition Demonstration project was launched as a result of a congressional authorization in 1990. It was meant to provide continuous, comprehensive Head Start-like services to children as they entered the public schools and moved through 3rd grade. Grantees were to establish partnerships between Head Start agencies and public schools and to include a local evaluator in their partnership. The four main components of the program were: (a) parent participation in schools and in their children's learning; (b) health and nutrition services; (c) family support services; and (d) educational enhancement, particularly focusing on developmentally appropriate practices.

The program was implemented in 31 different sites by 31 grantees. These 31 different programs were developed according to local conditions, preferences, needs, and strengths. Thus, what we are looking at today is an evaluation of 31 different programs with some common elements.

This study involved collaboration among many people. Civitan Research Center took the lead on the national evaluation. All local evaluators participated in the design of the study, helping to determine what outcomes would be measured and what the measures would be. The local program people also participated in that process. A national advisory panel helped as well.

Today, we are talking about the national evaluation that combines data from all sites. The 31 local evaluators who did their own evaluations might have had some results that differed from those in the national evaluation. The written report will be available later this summer. In addition, the data collected for this study will be available to the research community for secondary analysis through the Head Start data archive.

Craig Ramey: Let us begin with something that came out of this substantial, lengthy collaboration, that is, how to get 350 program representatives, evaluators, and advisors to come together to discuss and agree on what the study was about, what the measures would be, and so forth. We decided that a child's successful transition to school represents a complex, delicate balance of expectations, values, and interactions among children, parents, educators, and communities as they strive to insure that all children have a good start in learning the academic and social skills essential for later success in school and in life.

We also agreed that the transition to school is a process that starts when parents and educators engage in activities to prepare for the child's school entry and ends when the child, family, teachers, and other key individuals have achieved a shared understanding of expectations as well as the supports needed to insure that the child will make good progress in the school setting. This implies, of course, that a successful transition may not occur for all children.

This large study enrolled 2 cohorts of children—cohort 1 in the fall of 1992 and cohort two in the fall of 1993. Each year children were randomly assigned to either a demonstration group or a comparison group by using a variety of sampling procedures, including the assignment of clusters of schools to a particular group. Random assignment worked its usual magic; the demonstration and comparison groups were remarkably similar at the outset. There are 8,401 former Head Start families in the sample, although the total sample is closer to 12,000. For the sake of simplicity, we are not reporting today on the classmates of former Head Start children.

I want to salute each of the 31 sites for an heroic data collection effort, which included: (a) open-ended and qualitative interviews, (b) direct assessments of children, (c) standardized ratings by teachers, (d) reports by principals, (e) direct observations of classrooms, (f) review and abstraction of school records, and (g) community-level aggregated data. It represents a gigantic data set—one that the child development and family development communities will find useful for pursuing a variety of issues.

The 31 sites were selected by a competitive review process. Only one site could be selected in a state, so there is tremendous geographical dispersion of the sites. Across the sites, there is tremendous diversity in the Head Start population. We tried to have that diversity work for us in terms of understanding the mechanisms whereby child, family, school, and other factors produced the differentiated outcomes that we will talk about in a moment.

We quickly realized that characterizations made along demographic dimensions of Head Start families probably were not the best overall characterizations that we might make. Thus, we tried to derive a typology of different kinds of families who represented the Head Start population.

We analyzed 15 different variables that are frequently used to characterize Head Start or other families in the population, using a cluster analysis to find out how many discrete clusters there were. Time does not allow describing all the methodological niceties we employed, but I will mention one. We generated the typology of one half of the sample to sort families into statistically significant, discernibly different groupings. Given a sample this large, we generally set the *p* value at .001. Thus, we developed groupings on a random half of the sample and then replicated it on the other half of the sample. If we obtained a good replication we said, "This satisfies our criteria for a replicable finding." This process was restricted to the former Head Start sample; it was not applied to the roughly 4,000 non-Head Start families.

From these analyses we derived the following seven family types:

1. Approximately 42% of Head Start families were what we called the most resourceful. They had more income, their caregivers had more education, and the fathers were present and involved.
2. Approximately 30% were single-parent families receiving welfare subsidies. They were our lowest income group.
3. Approximately 11% were families characterized primarily by speaking a language other than English. They tended to be intact families.
4. Approximately 6% were highly mobile families, moving as many as 10 or more times in a year.
5. Approximately 5% of the families had absent mothers and the primary caregivers, frequently grandmothers, were older.
6. Approximately 3% of the families were characterized by a mother who was chronically ill, frequently with a psychiatric as well as a physical illness. There was a high incidence of depression, which takes a big toll on the adults and children.
7. Approximately 3% of the families were recently homeless.

The consortium defined a successful transition as having four key elements:

1. The parents indicate that the child's academic and overall adjustment is good.
2. The child indicates that he or she likes and does well in school.
3. The teacher indicates that the child has made a satisfactory social adjustment and a satisfactory academic adjustment.
4. The child achieves at or above average level in reading and in math.

The key elements present in all the transition demonstration programs were the following: (a) a local governing board to guide program development implementation; (b) links between Head Start programs and public schools; (c) activities to increase parental involvement in school and educational processes; (d) provision of health services and nutrition education; (e) emphasis on developmentally appropriate classroom practices; (f) provision of supportive social services; (g) an individualized transition plan for each child to ease the transition into kindergarten and to acquaint the families and the school personnel alignment; (h) development of a comprehensive family needs assessment and individual family support plans; (i) activities to encourage the inclusion of children with disabilities in regular classrooms; and (j) activities to promote cultural awareness.

It is difficult to implement programs on this scale in 31 sites that differ in many ways. Sharon is going to describe what it takes to implement this type of intended treatment and some of the barriers to that implementation.

Sharon Ramey: Several salient factors facilitated program implementation. One was having strong community leaders. Often, but not exclusively, these were people who led the transition program. These leaders engendered strong community support and had a shared vision that this kind of comprehensive Head Start-like program should be available to all children from low-income families. A distinctive program feature was that all children and families in every classroom with one or more former Head Start children received the whole set of additional supports and services.

Another factor relating to good implementation was the existence of close working relationships among the partners—the Head Start program, the school partners, and the researchers. This relationship was predictive of who implemented the strongest transition demonstration programs.

A third factor was patience with this overall process of social and educational reform, despite problems encountered (e.g., redistricting, school closings or openings, changes in principals, superintendents, program directors or evaluators). Successfully providing the key program elements that Craig talked about—in a given year, in a given town or rural district with a particular superintendent, tax base, and personalities—seemed to be linked with leaders having political awareness and a sense of the big picture.

In terms of some barriers or challenges that held back successful implementation, one was chronically conflict-ridden relationships among the partners. Grantees with continuing problems in the fundamental partnership (e.g., inability to resolve divergent policies about who can work with certain children, labor requirements in a unionized school district) were least likely to implement a good program.

Developmentally appropriate practices in the classroom were a huge problem. Schools have their own philosophy, but people implementing the transition programs did not always agree with what classroom teachers were doing. There was much tension around the educational curriculum and classroom practices.

The sheer number of schools—more than 450—complicated this matter. One site included all the schools in the state. In some sites, the schools were dispersed over more than a 100-mile radius. Often, we were dealing with multiple school districts within a single site.

Helping schools create more family-focused environments was a big challenge. School personnel had to do things such as find space and set up family resource rooms. Developing more collaborative networks within communities was also a challenge. In many sites, program developers met monthly or even weekly with all the social and health service providers to identify ways to avoid duplication of services and help families be aware of available services.

Taking all the sources of data we gathered and applying some criteria developed by the researchers across the 31 sites, we judged that six programs were strongly and consistently implemented during the years in which they operated. They fulfilled almost all the goals of the demonstration program as it was established.

At the other extreme, we judged eight programs to be extremely weak, meaning that in no areas did they achieve above average. They were at the lowest levels of implementation of health and nutrition programs, educational practices, social services, and parent involvement.

Many sites (approximately 55%) fell into the middle category, meaning they either had a few outstanding areas and other weak areas, were sort of middling in everything, or had a few great years and a few years that were much weaker. Thus, unevenness either within the program or fluctuation from year to year characterized the majority of sites.

In terms of school governance opportunities, the vast majority (80%) of former Head Start parents say they belong to PTAs, 30% serve on committees and boards, 26% help make decisions about school policies or programs, and nearly an equal number serve as an officer in one of their organizations. Thus, a positive picture of parents' continued engagement emerges.

In terms of former Head Start parents' expectations, about half the parents did not anticipate any difficulties for their children during the transition. Approximately 20% thought their child might have some social problems related to immaturity, approximately 10% thought their child might have some academic or behavioral readiness difficulties, and 9.5% said their child had special learning needs.

Parents said they did various proactive things to help minimize those problems. Nearly 30% tried to show an interest in school and learning at home, 22% provided guidance in developing social adaptive-behavior skills, and approximately 13% worked to create strong home-school linkages (i.e., frequent contacts with teachers and participation in school activities).

Looking at parents' frequency of contact with teachers in kindergarten, 85% met from one to three times a month to daily. Contact with teachers declined over the years, especially daily contact, which decreased markedly by the end of 3rd grade.

Let me point out a fundamental concern about this research project and our ability to know whether the transition demonstration program worked. Early on we saw what we call a competition effect. People who received the transition grant understandably wanted that intervention for their schools and their children. Random assignment meant that, at each site, some schools participated in the intervention program while others were in the control group. Thus, people who were motivated to give this program sometimes did not get it, but they incorporated elements of the program at their schools anyway. At some sites where randomization was not a problem, school administrators saw good things happening, especially close collaborations with social and health service agencies, and decided to offer those things to all the elementary schools (e.g., inviting teachers in the control schools to in-service teacher training on developmentally appropriate practices). In about ⅓ of the sites, the control schools got extra funding (e.g., from private foundations, other federal agencies, or reallocation of local school district funds) to do some of the same activities done in the demonstration program. Therefore, this is not a "pure" study. The line between the treated and the untreated groups is a fuzzy one.

Characteristics associated with greater home involvement are the following: (a) a caregiver does not screen positive for depression (nearly 40% of families screened positive for depression), (b) a higher level of parent education, (c) fewer children in the home, and (d) English being spoken in the home. While all ethnic groups are highly involved, the most engaged group is African American families (a statistically significant finding). In terms of family type, the most resourceful parents are very engaged, as are single parents (16.9% and 16.6% respectively)—a fact that might defy the negative stereotype about single mothers on welfare.

Turning to the availability of and satisfaction with health care, more than 95% of families are satisfied with their health care. Slightly more than ½ are on Medicaid, while most of the remainder of families are insured through their employers. Only 10-12% do not have health care coverage, which is less than the national average for children of this age.

Looking at receipt of any kind of government support program, in kindergarten a little more than ¼ of families received one or more of a long list of programs. Each year this percentage declined. This is a positive finding, based on the parents' self-report. Each year parents identified any unmet social or health services needs. The percentage of families with unmet needs goes down in the same stepwise progression each year, as does the percentage of families receiving public support. All this occurred before the Welfare Reform Act.

In terms of the classroom-learning environment, we used a tool that was developed by Abbott-Shim and Sibley for characterizing preschool classrooms but that was adapted for use through 2nd grade. We found a slightly higher, statistically significant level of developmentally appropriate learning environment in the demonstration classrooms compared to the control classrooms.

Turning to child outcomes, we had parents and teachers rate the children, using the Social Skills Rating System. To our surprise, parents' ratings of their children's social skills were a little lower than teachers' ratings. Perhaps parents have higher expectations of their children. In fact, although there is a high correlation between parent and teacher ratings, in general, all the parents rated their children a little bit lower than the teachers did. Another surprise was that teachers' appraisals showed children's social skills lagging a little below their academic skills.

The children enter kindergarten somewhat below national averages in reading and math, which is not surprising. Hundreds of studies suggest that family income and education is associated with lower school entry skills. However, what is amazing is that between the fall of kindergarten and the spring of 1st grade (i.e., the first 2 years in school), the children as a group rise very rapidly in every single site. In 3rd grade, a slight downward trend occurred in about ⅔ of the sites.

About 85% of the children in the original data set were in the final data analysis set. That includes children for whom we have a full set of data at either the end of the 2nd or 3rd grade or both grades. The sites were heroic in being able to track these families. Many children moved outside the treatment schools. Children who make frequent moves do not perform quite as well in school as those who do not move.

The same pattern we saw for reading holds true for mathematics. Children start off with somewhat lower mathematics skills, numeracy, and math problem-solving skills relative to national norms. By 2nd and 3rd grade, however, they are right at national average. We have never seen a large-scale national Head Start study that shows these children performing at national average. That is extremely encouraging.

In terms of the Peabody Picture Vocabulary Test (PPVT), which is not as sensitive to what is taught in the early elementary school years compared to preschool, scores do rise, but the increases are not nearly as dramatic as for math and reading scores, based on the Woodcock-Johnson scales of reading and math.

In terms of special education, placement rates initially are quite low (8-10%) and then go up year by year, which is true nationwide. Across the whole sample about 20% of the children were in special education classes for at least 1 year during the first 4 years of school. Remember that at least 10% of the children in each Head Start program are supposed to be children with disabilities. With respect to family types, the rate of placement in special education classes is slightly elevated in single-parent unemployed families.

In terms of highly valued activities in the transition programs, the parent resource rooms got a positive rating from everybody. Home visits, special newsletters for the families, and teaching families about home-based learning activities also were highly valued.

It is difficult to have a small set of conclusions. First, children overwhelmingly like school. They say they like it, they say they are doing well, and they say they value it. However, as early as the spring of their kindergarten year, about 7% of the children say, "I am not doing very well in school, and I do not like school." Those two things are associated with many other negative feelings, such as not getting along well with peers and teachers. The children's parents also say things are not going that well. These children's reading and math skills and social skills at entry into kindergarten are identical to the other children. However, their self-report is highly predictive of later retention in grade or placement in special education, and more predictive than test scores, parent reports, or teacher reports. The bottom line is we need to listen to our children and not discount their early unhappiness.

Second, parents overall report many opportunities for involvement and fairly high levels of involvement in the school program, enhanced largely by the transition program. Craig is going to share a third conclusion.

Craig Ramey: Head Start has lived for more than 30 years with the general public believing that the effects of Head Start fade out. The reading and math scores from this study lead to exactly the opposite conclusion.

Take into consideration that these school districts were selected on the basis of their ability to convince a set of impartial reviewers that they could implement this program, so they probably are not representative of the general population. As Sharon described, there was competition by the schools in the comparison group. Had the demonstration schools been in one geographic site and the comparison schools been in another geographic site where there would be a diminution of the likely diffusion effect, we might have seen some different results.

Despite all that and our lack of knowledge about what gains the children made in their Head Start year, this continued progress up to the national average by the end of 3rd grade is strong evidence of the fundamental soundness of the partnership between Head Start and public schools, particularly those that have a fair amount of resources.

Edward Zigler: Thirty years ago, when I was director of what has now become the Administration for Children, Youth and Families, I started a project called Project Developmental Continuity to counter an inoculation model of intervention we inherited in the mid-1960s from Hunt and Bloom. That is, if one can do something positive with a child in a short period of time in Head Start, the child will be inoculated against all the ravages of a bad environment after that. I thought that model was stupid back then, and I still think it is stupid.

I argued that we ought to follow Head Start with a school program, an interface such as Project Developmental Continuity, to work at that transition, which is so stressful to children. This morning's presentation is the culmination of 30 years of selling that idea. I worked with Senator Kennedy to see that this transition project was written into the law. This morning's talk also reflects 8 years of work by a gigantic team of people across this country in 31 sites. We owe a vast debt of gratitude to these investigators.

Let me start at the end. A few years ago I wrote a book called "Head Start and Beyond" in which I said that to have a robust effect on children, we should create a program for infants and toddlers age 0 to 3. Over the years we have produced such a program in the United States, namely Early Head Start. Then, I said have a terrific preschool program to prepare these children for school, to get some school readiness outcomes. We have that in Head Start. Now, of course, 42 states have mounted their own state preschool programs.

Then, I said the third piece is those absolutely critical years from kindergarten through grade 3. I argued that by giving children an 8-year period of intervention, we ought to begin seeing the more robust effects that most of us have been looking for in evaluation. The missing piece, of course, has been the school piece. This study at least tells us what can be accomplished with that.

Head Start has been burdened with the fade-out phenomenon. We started seeing it in 1965 with the infamous Westinghouse report, which almost led to the abolishment of Head Start. Much work was required to keep the program going in the face of the fade-out criticism. Several studies have shown just the opposite of fade out, that there are "sleeper effects" or benefits years after children leave Head Start. That is not a new finding.

If fade out does occur, and certainly IQ effects fade out, one must examine closely the schools to which these Head Start children go. There are recent studies reported at this meeting about the poor quality of teaching that poor children encounter in this country. It is vital to keep supporting the child at his or her current level of development and not depend on some inoculation that took place in preschool.

Twenty years or so ago, I wrote a paper in *The American Psychologist* called "The Future of Early Childhood Intervention." I said that to have an impact on decision makers, evaluators must do a cost-benefit analysis. Precious few have done that. The High Scope evaluation had the impact it did because of Barnett's cost-benefit analysis. Everybody can understand results that show investing $1 saves $7. That is not a cost but an investment.

Site effects are tremendously important. We heard at this conference about Manpower Development Research Corporation's study of welfare reform in which site effects swamped all the variables that we usually think pick up the variance. What is going on at the site? How was the program implemented? What is the success of implementation? Six of the 31 transition sites were successful. Why did the demonstration program work in these sites? What were the barriers to implementing these programs across the sites?

We have to spend as much time in our process evaluations as in outcome evaluations. The best methodologist of my lifetime—the deceased Donald Campbell—said the way to approach evaluations in our experimenting society is first to do the process evaluation, find out what the barriers are to implementing the program, work out those barriers, get the program running smoothly, and then do the summative evaluation.

This transition data set is one of the richest data sets I have ever seen. It is a gold mine for secondary analyses. My own students will be working on it for years to come. With 8,000 subjects, however, I would pay next to no attention to *p* values and see if further analyses will turn all these *p* values into effect sizes. That way, we would know if these are meaningful differences. I am raising an old argument about statistical versus practical significance.

Within the heterogeneity in the population that most of us deal with, I want to remind you of the subgroup that suffers from depression, as the Rameys mentioned. In welfare studies by Child Trends and others, the proportions of those depressed in the welfare population reaches as high as 40% of the sample, which is close to that found in samples of the Head Start population. Studies in the field of developmental psychology or pediatrics show that depression is terrible for children. The impact of having a depressed mother on the development of children is extremely negative. We have evidence of what happens when a little baby encounters the flat affectless state of a depressed mother.

I would argue also about the importance of variables other than academic. We used to call this the "whole-child" approach, meaning that the sum total of a child is not limited to his or her intelligence or literacy or math scores. There is considerable evidence that motivational and emotional factors may be more important in determining a child's behavior.

Also important at a practical level for Head Start people and teachers of the young is deciding what developmentally appropriate practice means. The final decision probably will combine academics with play, as found in Stipek's work. Developmentally appropriate practices must be a constant, and that requires continuity of curricula between preschool and the school years.

Regarding parent involvement, Henrich reviewed the literature and found that parent involvement is related to children's academic performance among middle-class families but not among the poor. Why not among the poor? The national road map for school reform is the eight goals of education. The eighth goal is getting parents involved in their children's schooling. This finding raises a mystery that we have to solve.

Finally, Craig and I have debated randomized design before. It will remain the gold standard as far into the future as I can see. But a body of good thinkers has called it into question: Schore, McCall, and two heavyweight economists, Hedges and Heckman. The comparison groups do not live in cages. In mounting an intervention, there are huge diffusion effects between the experimental group and what is called the control group. It is not a control group, however, because it gets many services that would not be available without the experiment. Thus, we must think long and hard about developing designs to deal realistically with those to whom we are comparing our experimental group and what their lives are like.

AUDIENCE COMMENTS AND QUESTIONS

Comment: It seems like the control group did better than the test group.

Sharon Ramey: Yes. Our primary model involved a hierarchical linear modeling that took into account baseline differences. We looked at individual growth curves using an analytic technique to determine the level at which each child enters and the amount of subsequent growth. The control children did start off better, so they look a little better. However, taking into account the differences in where the children started and also statistically considering their age, family conditions, and some other features, we do not see a real advantage of one group over the other. We expected to see larger differences in the sites with the best implementation. However, we did not. The sites that implemented the strongest programs also had the biggest competition. Thus, children in both groups did well.

Question: It is astonishing to see former Head Start children in the 3rd grade who are performing close to the national averages, based on standardized tests. What are your interpretations?

Sharon Ramey: We spent literally months thinking maybe these measures were scored wrong. We had independent people review the scoring protocols. We think the school personnel were motivated to help these children. We also think that when children are tested individually in a nonthreatening way by well-trained, highly skilled examiners the appraisals are probably much more valid.

It is important to note that the teachers' ratings of the children's academic skills placed them a little bit below national average and also were lower than the children's reading and math test scores. It may be that in the everyday school environment the children do not have the opportunity to fully show all their skills.

Craig Ramey: I want to amplify this with one other point regarding the representativeness of these sites for educational quality around the country. Once the sites were chosen, we compared the census tracks for those catchment areas with census tracks for the rest of the country. It will come as no surprise that most of these transition sites are somewhat more advantaged than the national averages. What that means, in part, is that even though these children were getting to national average, their counterparts in some cases were doing even better.

As Ed pointed out, we have to understand the layering and the comparative nature of some of these situations. However, I am surprised and delighted because the phenomenon seems to be so regular across the sites. It is not just a jump between kindergarten and 1st grade. This study indicates we are on the right path in terms of policy. Begin the intervention earlier, go longer, and do it better. Some of you knew that 30 years ago.

Recent Findings From the Head Start Mental Health Research Consortium

CO-CHAIRS: Michael L. Lopez, Cheryl Boyce
DISCUSSANT: Kimberly Hoagwood
PRESENTERS: Donna Bryant, Edward G. Feil, Loretta A. Serna, Ann P. Kaiser, Terry Hancock, Jeanne Brooks-Gunn

Results of research being conducted by the Head Start Mental Health Research Consortium on early identification of and intervention with young children who are at highest risk for behavior problems were presented. Strategies used for screening and early identification of behavior problems, the incidence of behavior problems in five samples of 3- and 4-year-old children, and an overview and preliminary results of classroom and family-based interventions were discussed. The implications of these findings both for research and practice were included.

■ Early Findings from the Preschool Behavior Project

Donna Bryant, Janis Kupersmidt

This presentation reports early findings from the first cohort of Head Start children who participated in a comprehensive, multi-modal intervention for disruptive preschoolers. Teachers of preschoolers who exhibit frequent aggressive and disruptive behavior face challenges in helping the children learn to control their behavior and get along well with other children and adults. Extensive research on the prediction and correlates of early aggression has been published, but much less attention has been given to its prevention or treatment, especially in the preschool years (Bryant, Vizzard, Willoughby, & Kupersmidt, 1999). In the Preschool Behavior Project (PBP), teachers learn to help children improve their social-emotional skills, learn empathy and emotion-recognition, recognize and control anger, use problem-solving in social interactions, and communicate better with others.

Intervention consultants conduct teacher workshops, mentor teachers one-on-one through weekly in-class visits, make home visits to the parents of children with challenging behaviors for parent support and training, and coconduct parent meetings with Head Start staff. The PBP includes components focused on improving teacher-child interactions and teacher's behavior management strategies (Webster-Stratton, 1989); developing emotional intelligence and regulation skills as well as social problem solving skills (Second Step Preschool Curriculum, Committee for Children); and dialogic reading in the classroom for improvement of communication skills (Whitehurst, Arnold, Epstein, Angell, Smith, & Fischel, 1994).

Twelve Head Start classrooms at 3 centers participated in year 1 of the intervention and 13 Head Start classrooms at 3 centers comprised a wait-list control group. Families of children from these classes (55 Intervention, 74 Control) were recruited into the study. About half the children had high levels of aggression and noncompliance as rated by their teacher at the beginning of Head Start (indicated). About half had average to below-average levels of aggression (non-indicated). Children and parents were individually assessed/interviewed in the fall and spring. Also in the fall and spring, teachers provided reports of children's positive and problem behaviors through the Early Screening Profile (Feil, Walker, & Severson, 1995) and the Social Skills Rating Scales (Gresham & Elliot, 1990) as well as ratings of children's inattention/oppositional behavior via the Iowa Conners Teacher Rating Scale (Pelham, Milich, Murphy, & Murphy, 1989).

At the end of the Head Start year, intervention teachers rated both the indicated and non-indicated children significantly differently than did control teachers. Specifically, intervention teachers saw their children as more appropriate in social interactions and exhibiting fewer problem behaviors and as less inattentive and oppositional than control teachers rated their children. Clear differences still remained, however, between indicated and non-indicated children. These early results indicate that the PBP intervention may be as effective for non-aggressive children as for aggressive children.

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First Year Results from the Cross-Cultural Analysis of the Early Screening Project

Edward G. Feil, Hill Walker, Herbert H. Severson

The early identification and remediation of emotional/behavior disorders is a high priority for early-childhood educators. However, tools for screening behavior problems in preschool children are few and often have not been studied within a cross-cultural framework. There is a growing need for cross-cultural research on screening instruments appropriate for use with young children from culturally diverse backgrounds who are at-risk for emotional/behavioral problems. Because Head Start is one of the most widely applied preschool settings, Head Start classrooms provide an ideal environment for conducting applied research and encouraging best practices among diverse multicultural low-income populations.

Cultural factors can powerfully mediate the social behavior of children from diverse backgrounds within the context of schooling (Koot, Van Den Oord, & Boomsma, 1997). Consequently, screening-identification procedures must also be appropriately normed and constructed so that the impact of cultural background factors do not cause Head Start children to be misjudged in the screening process and identified for the wrong reasons.

This research assessed the cross-cultural psychometric characteristics and validity of a multiple gating screening procedure designed to identify at-risk preschool children, ages 3 through 5. This unique screening system, the Early Screening Project (Feil, Walker & Severson, 1995; Walker, Severson & Feil, 1995), uses a multiple gating approach to screen and identify at-risk children in Head Start centers in rural and urban sites in Oregon. This screening-identification procedure relies on teacher judgements, in vivo behavioral observations, and normative criteria to identify preschool children exhibiting serious behavior problems. With this research, we provide initial evidence that the Early Screening Project (ESP) can be used appropriately within the context of multicultural Head Start populations. It was our intent to: (a) test the feasibility of the ESP's use with each of these child populations and (b) determine whether separate decision making cutoff points and criteria are necessary to ensure objective use of the ESP procedures with these subgroups of the Head Start population.

Overall, we were very encouraged by the results obtained with respect to the cross-cultural nature of the Early Screening Project. Ethnic status as well as an aggregated white/non-white variable to maintain better statistical power were used to test for differences among ethnic groups. These test results were very encouraging with no significant differences among ethnic groups, even among teacher ratings and observations. These results are preliminary, and it is possible that the number of subjects was not great enough for sufficient statistical power to detect differences. Therefore, we are currently conducting additional cross-cultural studies and analyses with greater numbers of participants to increase the chance of detecting a meaningful difference. The question remains, however, as to whether these lack of differences hold up in regards to long-term outcomes (e.g. accessing specialized services, retention, and so forth). As part of this project, we are committed to longitudinal research in order to evaluate the ESP's predictive validity among representatives of different ethnic groups. Our hope is that teachers and direct observations can reliably identify children based on children's behavior and not their ethnicity.

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■ Primary Prevention with Children At-Risk for Emotional or Behavioral Disorders: Data on a Universal Intervention for Head Start Classrooms

Loretta Serna, Elizabeth Nielsen, Katina Lambros, Steven Forness

Within the last 15 years, researchers (e.g., Achenbach & Howell, 1993) have documented the rise in severe problem behaviors and the decrease of social and mental health competencies of young children in the United States. In many cases, the data show that these problems persist over time and eventually lead to negative outcomes in adolescents and young adults (e.g., Achenbach, Howell, McConaughy, & Stanger, 1998). Fortunately, a growing number of studies indicate the need for and the effectiveness of prevention programs for young children (e.g., McConaughy, Kay, & Fitzgerald, 2000). This study presents one attempt at developing an effective program that is a user-friendly, universal classroom intervention. In general, the purpose for developing such a program is for the prevention of future mental health problems among these children. Specifically, a classroom-wide universal intervention on direction following, sharing, and problem solving was embedded in a story and song format for Head Start children. The intervention covered a 12-week period with two 3-hour sessions in each experimental classroom weekly. Pre and post data on 53 children in 3 experimental classrooms and on 31 children in 2 control classrooms were collected. Results suggest significant improvements for the experimental group on adaptive behavior, social interaction, and attentional measures. Overall, children in the experimental group who were at-risk for development of emotional or behavioral disorders prior to intervention either significantly improved or maintained their preintervention functioning. Implications of early detection and primary prevention efforts within a Head Start context are discussed.

At the end of the first year the overall findings, were encouraging. All outcome measures were generally in the predicted direction on the Social Skills Rating Scale (Gresham & Elliott, 1990), the Early Screening Project (Feil, Walker, & Severson, 1995), the Vineland Screener (Sparrow, & Cicchetti 1989), and the Conners scales (Pelham, Milich, Murphy, & Murphy, 1989) with the exception of the parent ratings on the SSRS–Social Skills scale, which revealed significant improvements in social skill levels for the control group. Such findings may be explained by school entry and exposure to a classroom setting, which requires acquisition of social skills such as listening, sitting at a desk, and hand raising. This was the only comparison of 13 such analyses in which the control group significantly surpassed the experimental group on improvement in functioning over time.

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■ The Emotional Health of Low Income Children: Assessing Self-regulation in Homes and Classrooms

Lisa McCabe, Jeanne Brooks-Gunn

Research has only recently begun to explore the processes underlying early behavior problems. For example, a vast literature indicates a strong link between early self-regulation skills, such as inhibitory control, and later social competence (Eisenberg, Guthrie, et al., 1997; Mischel & Rodriguez, 1993; Shields, Cicchetti, & Ryan, 1994). However, much of the work examining early self-regulation has been conducted in laboratory settings. In the present work, we have been developing a battery of emotional self-regulation assessments for use in homes or classrooms with ethnically diverse children. Specifically, these measures tap several key components of emotional self-regulation: motor control, cognitive control, impulse control, and sustained attention. We piloted assessments with 115, low-income, 3- to 5-year-old (M=51 months), English- and Spanish-speaking children.

Based on preliminary results three batteries have been identified. The first includes assessments that can be coded live. For example, in the Circles game, which taps motor control and is based on the work of Kochanska, the child draws a circle at normal speed, then as quickly as possible, and then as slowly as possible. Circles, as well as other live-coded assessments piloted in this study, are currently being included in assessments with 1,200 4-year-old children from the longitudinal Project on Human Development in Chicago Neighborhoods. These assessments will be used to examine the relationship between emotional self-regulation and a variety of environmental factors and child developmental outcomes.

The second battery of emotional regulation assessments is made up of measures coded from videotapes of the interactions. For example, in a measure of cognitive control, the Head and Feet game, children are instructed to touch their head when the tester says feet and vice versa. Coding focuses not only on whether the child responds correctly or not, but also on self-corrective behavior (e.g. the child starts to reach for his/her head, but then changes to touching feet instead). Coding from videotape allows accurate analyses of these quick, yet revealing indicators of children's ability to inhibit prepotent responses.

Reports from teachers involved in the project suggested that children might behave differently when assessed one-on-one with an adult, as compared to interactions with peers present. For this reason, our third battery focuses on assessments that can be administered to either individual or groups of children. For example, in the gift wrap task, again based on the work of Kochanska, children are asked to wait and not peek while a present is wrapped for them. Coding of this impulse control task focuses on whether or not children peek as they wait for the present to be wrapped. Preliminary results suggest that, indeed, children's ability to control impulses is related to the presence of peers. In some cases, children are enticed to peek because of friends' behaviors, while in others children are aided in their attempts to not look by friends' verbal or physical reminders. Future analyses will more closely examine the psychometric properties of these batteries, as well as the development and expression of emotional self-regulation in young children.

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Child Development, Education, and Care

Impact of School Quality on Children's Success

CHAIR: Carol H. Ripple
DISCUSSANT: Sharon Lynn Kagan
PRESENTERS: Deborah Stipek, Ellen Peisner-Feinberg

Carol Ripple: Welcome to our session on the impact of school quality on children's success. Our first speaker is Deborah Stipek, who is currently a professor in UCLA's Department of Education, and since 1991, has been codirector of a doctoral and postdoctoral program in applied human development funded by the National Institute of Mental Health. She is currently directing a large study of the transition to elementary school by children from families with very low incomes and has strong interests in educational and other policies affecting children and families. In January 2001, she will become the Dean of the School of Education at Stanford University. Today, Dr. Stipek will talk about the effects of instructional quality in kindergarten and 1st grade on motivation and achievement among children from families with low incomes.

Our next speaker will be Ellen Peisner-Feinberg, who for more than 10 years has been an investigator at the Frank Porter Graham Child Development Center at the University of North Carolina at Chapel Hill where she has worked on a number of studies on quality and child outcomes. She is currently the codirector for the North Carolina Head Start Quality Research Center, a 5-year project designed to study a wide variety of issues related to quality practices and child and family outcomes in Head Start. She is also a principal investigator for the Cost, Quality, and Child Outcomes in Child Care Centers Project, a longitudinal study of center-based care and children's outcomes across four states. Dr. Peisner-Feinberg will talk about the 5-year findings from the Cost, Quality, and Outcomes Study, which relates child care quality to children's development through 2nd grade.

Our discussant is Sharon Lynn Kagan, a senior associate at Yale University's Bush Center in Child Development and Social Policy recognized nationally and internationally for her work related to the care and education of young children and their families. She is the current president of the National Association for the Education of Young Children (NAEYC), the cochair of the National Education Goals Panel on Goal One, and a member of over 40 national boards or panels.

Deborah Stipek: I will be giving a data-driven talk about some work that I have been doing with a group of colleagues whom I would like to acknowledge. We refer to this as the School Transition Study, which is being done under the auspices of the MacArthur Foundation Network on Middle Childhood. The study includes about 390 children from diverse backgrounds. Approximately 15% of the children in the study were in Head Start programs. They come from three different regions: (a) a northeastern rural region, (b) a northeastern urban region, and (c) a western urban region. We have totally confounded ethnicity and the location of the children. This was not by design; it is just the way it turns out in this country. Again, the children are from families with very low incomes. All of them would be eligible for Head Start whether or not they actually participated.

We have children from a number of classrooms, a number of schools, and a number of school districts. Following children for 5 years in so many schools spread out is a real challenge. However, from a data analytic point of view it has given us a lot of power. The schools tend to predominantly serve children from poor families. Again, this is the US, so there is a concentration of poverty in most of the schools and a concentration of non-White children except in the rural area. We also have a substantial number of English language learners in the sample.

Originally, these children came from a study that was conducted by the Administration on Children, Youth and Families (ACYF) on a federal intervention program called the Comprehensive Child Development Program (CCDP). About half of the children were in the program, which is a family intervention program that is loosely defined and, thus, varied quite a bit from center to center. There were a total of 21 programs around the country, and we selected three programs in those three regions in which to follow the children. Thus, children and their families were studied from the age of 1 to 5 under this program, and then we picked them up just as they were entering kindergarten and are following them through 5th grade. The first cohort of children just entered 5th grade this year.

To give you a sense of the way we think about the total study, I will talk about some specific pieces. However, essentially, we see children in a larger set of contexts. We are particularly interested in looking at the relationships between contexts, about which Bronfenbrenner would be pleased. We have much data on relationships between the home and the school, parents' perceptions of the schools, and the schools' perceptions of the parents. One of the things that we have done with this study is get multiple perspectives on a variety of things, and I can assure you that there are very different perspectives on some of the same things. In fact, sometimes when we have teachers and parents report on a parent-teacher meeting, it is difficult to believe that they were at the same meeting; they seem to have such different perceptions of what actually occurred and what was said.

To give a sense of the scope of the study, I would like to present a partial list of some of the things that we are assessing. We are looking broadly at children, doing yearly assessments. Again, in an effort to get multiple perspectives, we ask teachers and parents about the children, and we often ask the children about the children. For a variety of the dimensions, we ask all three of these reporters about the same sorts of things. We also do a classroom visit every year since the children are in kindergarten in all the schools we are in. It is very labor-intensive.

We are focusing a lot on what kinds of educational experiences these children receive. Therefore, we look at a number of things at the classroom level, such as the demographics of the classroom, the ethnic distribution, and so forth, and a variety of things about the teacher, such as the teacher's experiences and beliefs and teacher efficacy. In our observations of the classroom, we do full-day observations, assessing the social and learning climate and the reading, math, and writing instruction. We also get a lot of information on how they communicate with parents.

One of the things that we have been interested in is, what is effective or considered good instruction? What is viewed as a positive learning environment for children and what is not? To what degree are our assessments of the quality of the classroom predicted by the demographics of the school? We also obtain a lot of school-level data in addition to the classroom-level data. Do schools that serve children from poorer families or a larger proportion of non-White children have better or worse instruction or better or worse social contexts for children? Obviously, we also are interested in what the consequences are for children's learning and their motivation as a function of our judgments of the quality of these classrooms.

One of the motivations for looking at this sort of thing was the fade-out effect—there is an intervention, and then children go to school and whatever positive effects of the intervention that were seen originally are not seen a few years later. This is not always true, but it is a fairly common finding in early intervention research. Therefore, we are interested in finding out which qualities of schools might either sustain and support, or undermine, the benefits achieved through early intervention.

This is a quick thumbnail sketch of the kinds of things that we assess in the classrooms. We use highly trained individuals, usually doctoral students in education, to do the observations. Among the particular variables that I will describe today is climate—whether it is a climate in which people respect each other and are kind and gentle to each other, whether it is child-centered, and whether there is some individualization. It is essentially what NAEYC refers to as a child-centered, nurturing, and supportive environment in which children engage in different activities and there is some opportunity for them to choose activities.

We also assessed classrooms on management. Do children seem to know what they are supposed to be doing? Are the rules clear and consistently applied, but in a fair manner that is not completely rigid and inflexible? Does one not hear the teacher yelling at the children all the time, threatening them that she is going to do something terrible to them if they do not sit down and be quiet? Is there some children responsibility?

One thing that is very difficult in putting together an assessment of classrooms is that it requires many judgments about what good and effective education is. As one can imagine, not everyone agrees on this. We consulted many experts and tried as best as we could to reflect in our observation measure NAEYC guidelines and subject matter guidelines, which often are disconnected. To the degree possible, our observation measure mostly reflects the predominant view of effective classroom instruction for young children. There might be people who would disagree with some of the things, but there are not too many people who would say that what we say is good is actually bad, although they might tweak things in a slightly different way.

We also assessed instruction in math and literacy looking at the nature of the task—the diversity—and whether there were individualized learning activities—the degree to which they actually assessed children and based activities on the assessments. We also looked at whether there were clear standards, whether the students had some accountability but with flexibility, whether there were connections within and between lessons—some coherence, whether they focused on underlying concepts as well as learning particular kinds of rules, whether they engaged in instructional conversations so that children were actually brought into the conversation, and whether there were diverse literacy tasks—a balance between phonics and whole language. Again, we are trying to reflect what seems to be the expertise of the day.

We also looked at resources in the classrooms. Many of these classrooms were very resource-thin. Keep in mind that these schools served predominantly children from poor families. Fifty-eight percent of the children on average were eligible for subsidized meals. There was substantial variability—from 0 to 100%, but these are predominantly schools that are serving children from families with very low incomes. Therefore, the variance is not nearly as large as if we had sampled just a general random population of schools. I also would like to point out that there was certainly variability in classroom instruction, but I would quote my colleague Walter Secada who described the classrooms as from bad to abysmal. That is harsh language, but, in fact, we did not see very good instruction. The scale that we used ranged from 1 to 5. In math, there were few schools that scored above a 2. In literacy, we saw a little better instruction. In fact, there was so little math done in these schools that we often had to go back two or three times to be able to see math instruction being done. When we asked teachers about this, they would say, "Well, we do that on Wednesdays." So not only was it bad instruction, but instruction in mathematics was not even done often whereas we saw a fair amount of literacy.

We divided the schools into three groups: (a) those that served a high proportion of children from families with low incomes, (b) those that served a medium proportion of children from families with low incomes, and (c) those which served a low proportion. Again, low is relative to the others, so that even the low proportion of children from families with low incomes is fairly high.

What we see consistently is essentially those schools that served a particularly high proportion or medium proportion of children from families with low incomes scored the lowest on our classroom quality measures, whatever dimension we looked at. The only place we did not find significant differences is in resources. Thus, the bottom line is, overall, the quality is poor, but the higher concentration of poverty in the school, the poorer the instruction.

There have been many studies that have looked at the amount per pupil expenditure and so forth, and we know that the poor get less. That is a fairly standard finding. However, this is the first study that I know of that has actually documented what the instruction looks like as a function of the poverty level of the student population.

We also looked at ethnicity and found that the higher the proportion of non-White children in the school, the poorer the quality on every one of our variables except for literacy. These are fairly large differences. These are all powerful and consistent findings.

We were interested in is what was driving this, because there is a correlation between the proportion of non-White children in the school and the proportion of children who are eligible for subsidized meals. Therefore, we covaried out each in both directions and found that what was driving this is the proportion of non-White children. Covarying out the proportion of children from families with low incomes has almost no effect on these findings. Covarying out the proportion of non-White children in an examination of the effects of the proportion of children from families with low incomes almost erases the low-income effect. We are doing correlational analyses and have to be very careful and cautious about how we interpret these. Nonetheless, if I were to put money on something, I would say we have a serious race effect here.

I would like to talk a little about the 2nd and 3rd grades. We used similar sets of measures in 2nd and 3rd grades of instruction and another observation measure. One of the dimensions that we added—which is now also a 4th and 5th grade observation measure—is a focus on learning. Essentially, a classroom is given a high score if the teacher shows high expectations and pushes children a little. It is a classroom in which the children are assisting each other and supporting each other's learning, and there is a climate and an ethic of learning and caring about each other's learning. It was a good thing that we added that dimension, because it turns out to be a powerful predictor of a lot of things.

We found in the 2nd and 3rd grades that we did not see as powerful differences as a consequence of the concentration of poverty. Although we still obtain the substantial differences related to the proportion of non-White children, it is not as powerful as we obtained in kindergarten or 1st grade. One idea for this is that there is more flexibility particularly in kindergarten and 1st grade. The curriculum becomes a little bit more standardized, and there is more textbook use in 2nd and 3rd grades. There are clearer stated expectations. Thus, there may be a leveling effect in essence in the 2nd or 3rd grade. It does not mean it gets better, but there is not as much variability. I should look at the variants on some of these, but I have a feeling that, especially in kindergarten, there can be tremendous variability in whether any learning is going on.

There was something else when we looked at the variability in the K-1 schools. There were two things in particular that I was not going to present, but they are so powerful that I thought I would mention them. In predicting the quality of the instruction in the classroom environments, one factor was the principals' expectations for how well the children in that school could learn—interestingly, more so than teachers' expectations. Principals' expectations came out as a strong predictor for about every dimension. Needless to say, we are going to be studying this further.

The other thing that came out as a strong predictor was teacher education, though not teacher experience. Teacher experience was not associated significantly with any of our quality measures. However, teacher education was powerfully predictive of almost all of the quality measures. Therefore, if one is a principal and trying to decide whether to put extra money in experience versus education, this suggests that one should choose education over experience.

What are the consequences of these differences in the variability of instruction? Again, I want to emphasize that we are talking about bad to abysmal. We are not talking about many classrooms in which there is powerful instruction taking place. We assessed the motivation of children in the classrooms behaviorally. For example, we had an observer judge how involved, engaged, and connected to the learning process children were. A score of 1 on the scale would signify that the children are highly distracted and are not engaged much, transitions take forever, and, thus, the children are not really connected with the program. A 5 would signify that the children were deeply and emotionally engaged and seemed to be enthusiastic and intellectually and emotionally involved with the learning process. Then, we predicted their engagement by the instructional dimensions. What we found was that these are all partial correlations. They are holding everything else constant, so that the quality of instruction does predict children's engagement, even if one partials out this focus on learning and whether the climate is a respectful, nurturing, and supportive environment for children.

Interestingly, the social climate turned out to be a powerful predictor, particularly in 3rd grade. This may have something to do with the fact that around 3rd grade children begin to have some doubts about their competencies, and one starts seeing belief systems that interfere with their learning and their motivation. A positive, nurturing social climate may be something that offsets some of the negative effects that one ordinarily would see. Basically, what this says is that the quality of the instruction and the environment for children does seem to have an impact on how engaged they are in the intellectual or academic process.

Are there some qualities of instruction that seemed to be more important and better predictors of children's motivation than other qualities? In fact, there is some variability. The major story here is that the climate is highly predictive of children's engagement and just as predictive as the nature of the instruction—in fact, perhaps more so. The social support of and focus on learning were particularly powerful.

We did separate engagement scores as well. The other engagement scores were a mean of all of the different subject matters. In looking at math and reading engagement, we found that none of the different dimensions about instruction that we assessed came out as particularly powerful. There is some variability. Cross-disciplinary connections and linkages to life outside of the classroom, which is something that most instruction people promote in both literacy and math, turn out to be fairly weak predictors. They are also fairly difficult to assess. There is probably lower reliability there. If one only goes to a classroom on one day but they make linkages to life outside the classroom on other days, one does not see it. The other things are fairly consistent over time. However, again, classroom climate variables are highly predictive of how engaged children are in the intellectual activity of the classroom.

Do our measures of the quality of instruction and the quality of the classroom predict learning? We divided the children between children who had begun 3rd grade with below average math scores and children who had begun 3rd grade with higher than average math scores. Again, these math score averages are fairly low in comparison to national averages. They are at about the 85th percentile, on average, but we just cut the sample at the median. Within those two groups, we divided the children between those who were in classrooms with below average instructional quality and those who were in classrooms with above average instructional quality. There is one clear and simple message in this: If a child begins 3rd grade below average in math and has a teacher who is not very good, the child gets a lot worse relative to the sample. It is a terrible combination. Thus, there is an overall main effect, but what one actually sees in this is that the children who are harmed the most from bad instruction are the ones who start the furthest behind. One sees the same thing in literacy, although it is not quite as profound. However, it is quite a significant finding. If a child starts 3rd grade with below average literacy scores and has a below average teacher or classroom instruction, he or she gets worse. If children have bad quality instruction, they get worse no matter what, but they get even worse if they start with poor skills.

There is a clear message from this whole story, which is that the rich get richer and the poor get poorer. A child in a school with a high concentration of poverty and a child in a school with a high proportion of non-White children are less likely to get bad instruction; they get abysmal instruction. Furthermore, a child entering a classroom with poor skills is going to be more harmed by less good instruction than if he or she enters with reasonable skills.

Essentially, this helps us understand what we already know, which is children who start school at a disadvantage have a difficult time trying to change that trajectory and get better. Thus, if we were not already highly motivated to try to improve the kind of education that Head Start children get when they go to elementary school, we certainly should be after looking at these data.

Ellen Peisner-Feinberg: I will talk about some of our data from the Cost, Quality, and Outcomes Study, a longitudinal study that looked at the relation between child care quality and children's cognitive and socioemotional outcomes from preschool through 2nd grade. The study also involved colleagues Richard Clifford at UNC, Sharon Lynn Kagan at Yale, Carollee Howes at UCLA, and Mary Culkin at the University of Colorado.

Currently about three fourths of all 3- to 5-year-old children are in some form of regular child care in the US, which suggests that looking at issues related to the nature of child care experiences and the long-term effects on children's outcomes is a question of national importance. Our study involved four states: California, Colorado, North Carolina, and Connecticut. We chose these states specifically because they varied in licensing regulations and economic climate. For example, at the time we did this study, Connecticut was ranked first nationally in per capita income, North Carolina was 33rd, and the other two states were somewhere in between. Similarly, with respect to licensing regulations, North Carolina was much more lax at the time with child-staff ratios of one to six for infants, compared to one to four or one to five in the other states, which is quite a significant difference. North Carolina has improved since then.

The major research questions that we are trying to answer from this study include: Is the quality of child care related to children's cognitive and socioemotional development? We are particularly interested in long-term development. We followed children from their next-to-last year in preschool through 2nd grade to see if there is any lasting impact after they enter school. Second, we were interested in whether there were any protective factors that buffer children from the impact of negative child care experiences—if children come from certain kinds of family backgrounds, are they more protected from the effects of poor quality child care than if they do not? The converse of that question is: Were there any differential effects for children who were at greater risk for school failure because of family stressors?

Our sample originally involved 401 child care centers from the four states—half nonprofit and half for-profit. For the longitudinal study, we followed preschool children in their next-to-last year of preschool from 183 classrooms in 151 of these centers. About one third of the children were from diverse ethnic backgrounds with some state variation related to what one would expect from those states. About 63% of the mothers had less than a college education, and about 19% had a high school education or less. Again, there were state variations. For example, North Carolina had a higher proportion of mothers with low levels of education than the other states.

In looking at participation rates over the 5-year period, there has been some attrition. When we went back in year 2 when the children were in their last year of preschool, we only went back to children who were still at the same center because we did our detailed observations of the classrooms in year 1 and had much briefer observations after that. Even though when we recruited the sample in the spring and asked parents whether they were planning on staying at the same child care center, a huge number had left by the time we returned. Return rates for parent and teacher surveys are high. Thus, we had good participation as far as that goes.

With respect to the measures used, we obtained demographic information from the parents and used these variables—child birth date, gender, ethnicity, and maternal education—in the analyses both in terms of control variables and covariants. We also looked at interaction effects to see whether any of these variables interacted with the quality of care in order to see if they were moderators of the effects of quality of care. We also obtained a variety of other information from the families, which I will not discuss today, such as parental beliefs and child care history and so forth.

We also did individual assessments of the children over four different time periods: the last 2 years of preschool, kindergarten, and 2nd grade. We looked at their receptive language ability using the Peabody Picture Vocabulary Test Revised (PPVT-R). We looked at math and reading skills using the Woodcock-Johnson Tests of Achievement. Each year we also asked the teachers to rate the children's behavior in the classroom using the Classroom Behavior Inventory, looking at cognitive/attention skills, sociability, and problem behaviors.

In addition, we looked at the quality of child care experiences from two different aspects. One was the closeness of the individual teacher-child relationship based on ratings from the teachers using the Student-Teacher Relationship Scale (STRS). Second, we observed in the classroom using a variety of measures and spending most of the day there. We used the Early Childhood Environment Rating Scale (ECERS) to look at the global quality of the environment. We used the Caregiver Interaction Scale (CIS) to look at teachers' sensitivity to children. We used the UCLA Early Childhood Observation Form (ECOF), which Stipek developed, to look at the child centeredness versus didacticness of the teaching approach. We used the Adult Involvement Scale (AIS) to look at the responsiveness of teachers to children. These are all from the first year of the study. We then did some briefer observations beyond that, which I will discuss.

When I talk about child care quality, we talk about two aspects of quality: (a) the practices and (b) the closeness of the relationships. We put the four sets of observational measures together into one index that we talk about as the practices. In looking at practices, our main observational measure was the ECERS, which is a 7-point rating scale. At the lower end, a score of 1 is considered inadequate—extremely poor conditions. It then goes up. A score of 3 is minimal, where children's basic health and safety needs are met but there are probably few opportunities for learning and little individualization. A score of 5 and above when matched to NAEYC statements on developmentally appropriate practices are in the range of developmentally appropriate practices. That is not to say that a 7 is not better than a 5, but these are classrooms where there are good opportunities for learning, close relationships, and some individualization. They are what we would consider the level of quality should be for all child care classrooms. Only about one fourth of preschool classrooms were in that good range of 5 and above. About 11% were in the poor quality range, where we would be concerned about adverse effects for the children, and the majority were somewhere in the middle. As an aside, the results are incredibly worse when looking at infant-toddler classrooms with about 40% in the poor quality range. However, we did not follow children from these classrooms.

I would like to present the means on the different measures. The mean on the ECERS was a little above 4, in that mid-range. The mean teachers' score on the CIS was almost 3 on a 1 to 4 scale. We would consider them moderately sensitive. According to the ECOF, the teaching approach was found to be slightly child-centered, with a score of about 3½ on a 1 to 5 scale with 1 being didactic and 5 being child-centered. Teacher responsiveness was somewhat low on the AIS, with teachers responding to children when they were near them about 31% of the time. Teacher-child relationships on average were fairly close with a mean score of 4.17 on the STRS, which ranges from 1 to 5. Thus, on average they were fairly close.

In looking at the child outcomes means, there are two quick points to make. One is that these children are scoring on average close to what one would expect—a little lower in the earlier years and a little higher in the later years. Some of that is an artifact, perhaps, of how the tests work with children at different ages, and some of that is an artifact of those we lost from our sample. However, we are not talking on average about an extremely low or extremely high scoring group.

To get to the heart of the matter, what do we get when we look at the relationship between the classroom quality measures or the teacher-child closeness measure and children's outcomes? When looking at the practices measure, it is related to language skills. This is controlling for all of the family and child background characteristics. We divided children into high-quality child care experiences, using an estimate based on children at the 75% percentile of quality, and children in low-quality child care based on the 25% percentile of quality. It is not quite the full range, but it provides an idea of what the differences look like. We use these measures as continuous measures in our analyses. At least through kindergarten, there is a significant difference in children's language scores based on the quality of the child care experiences they had. For example, by the time children are in 2nd grade there is no longer a significant difference. Therefore, there is some fading of the effect of child care experiences after they have been in school for a few years.

When looking at math skills, the picture is a little different. There is an interaction with maternal education. There is a small, but consistent, significant difference between children who were in low-quality care whose mothers have an average of a high school education, compared to children in high-quality care whose mothers have an average of a high school education. When looking at more highly educated mothers, we do not see any effects of quality.

When looking at teacher-child closeness, there is a similar pattern. For cognitive/attention skills, children in high-quality care are scoring higher. Keep in mind that beyond the first time point, different teachers are rating the children in relation to the first teacher's rating of the closeness of the relationship with that child. There are significant effects all the way through 2nd grade although there is also a significant decrease over time. Unfortunately, we did not have a 1st grade measuring point, because we did not have the funding to do that. However, there does seem to be a big difference from kindergarten to 2nd grade.

In looking at sociability, there is a similar picture. The difference between high- and low-quality child care experiences in 2nd grade is not significant, but it is significant through kindergarten. For problem behaviors, again, there is an interaction with maternal education. Here the lower the score the better—fewer problem behaviors is a better outcome for children. When comparing children from low-quality centers, in terms of closeness ratings, whose mothers have high school education with children from high-quality centers whose mothers also have high school education, there is a consistent difference that is maintained all the way through 2nd grade. Again, these are examples. We use these as continuous variables in our analyses. When looking at children whose mothers have a college education, by the 2nd grade there is no a significant effect in terms of problem behaviors between children from low-quality centers and those from high-quality centers. There are significant differences earlier, but they diminish by the time they are in 2nd grade. Thus, there is a differential impact.

Teacher-child closeness was also related to language skills. Again, the effects with language and math are not as strong for teacher-child closeness as they are with the more social and behavioral skills in the classroom. However, there is a significant effect through 2nd grade in language skills. It is the same for math skills as well. There is a significant effect, but much less of one. That is after controlling for all of our other variables in the analyses.

In summary, if we go back to our research questions, the first one was: Are there effects of child care quality on children's outcomes? The answer is yes. Child care quality is positively related to children's development through kindergarten and in most cases through 2nd grade with respect to receptive language ability, math skills, and social/behavioral skills. Different patterns of association were found for different aspects of child care quality. Observed practices were more closely related to children's cognitive and language skills, and teacher-child closeness tends to be more closely related to children's social and behavior skills and somewhat also to language and math skills, but not nearly as strongly.

The answer to the second question, are there protective factors, is no. In most cases, we found the same effect across different factors—children's ethnicity, maternal education, and child gender. There were no differential effects for children from these different groups. The effect of child care quality was similar across all of these groups. We did not find that for a child from a particular background or with particular kinds of experiences in the home that child care quality did not matter. In this case, we found that quality matters for all children. There is a positive relationship between child care quality and children's outcomes across all levels of maternal education and child gender and ethnicity.

The answer to the third question as to whether are there differential effects of child care quality for children who are at greater risk was yes. We found in two instances, math skills and problem behaviors, that child care quality had an even stronger effect for children whose mothers had less education. So that while quality had a somewhat positive effect for all children, the effect was even greater for these children.

We did some additional analyses where we looked at our measures of kindergarten and 2nd grade classrooms as well. Again, these were not nearly as detailed observations; they were about an hour or less. It was, unfortunately, due to funding constraints that we added it on when doing our child assessments. However, it gives us a little indication of what is happening. In looking at the correlation between child care, kindergarten, and 2nd grade practices, as well as the ratings of teacher-child closeness over time, there are no strong associations. For practices, the correlation is anywhere from .01 to .15. For closeness, it is a little higher at about .2 to .3 at different time periods. What these data suggest is that it was not the case, at least in our sample, that children who were in better quality child care were necessarily going to better quality schools. There was a little variation there. Therefore, finding these longer-term effects of child care is despite the fact that there has been variation with some children who were in good quality care going to good schools and some going to not so good schools and vice-versa. Similarly, there may not always be much of a correlation between the quality of children's kindergarten classrooms and the quality of their subsequent 2nd grade classrooms.

We then did a cross-sectional analysis where we looked only at children's 2nd grade outcomes and controlled for kindergarten and 2nd grade practices and kindergarten and second grade teacher-child closeness to see if there were still any effects of child care quality. There are some, but not as much as in the longitudinal analyses. They are not as powerful analyses. However, for math skills and problem behaviors, particularly, there is still a main effect of child care quality. More studies need to be done to look in more detail at children's experiences over the whole period of time. Again, our school-age measures were not nearly as powerful as our child care measures.

Finally, what our study suggests is a variation on the conclusion that Stipek drew from her study, and that is that the quality of experiences children have matters. We need to look at that and do something about it.

I will not go into much detail about this, but based on the first phase of our study where we looked at the relationship between the costs of child care and the quality of child care and the relationship among different aspects of quality, we found that there are relationships. There are three basic areas that we need to look at in terms of considering strategies for change to improve quality. The first is to look at issues related to fiscal strategies. We did find that higher-quality care costs more, so we need to look at a variety of creative strategies for providing more funding to improve the quality of child care.

Second, in looking at professional preparation and compensation, we found that higher quality was linked to higher formal education of teachers, more early childhood training, and higher teacher wages. Again, we need to look at ways to improve all of those.

Finally, we need to look at broader system and infrastructure changes. We do not have a national system of child care in this country. We have a variety of efforts, such as Head Start, public preschool, private child care centers, and family child care homes, that are often not linked to one another and may operate under very different systems and rules and standards. If we want to see a widespread change in the quality of child care, we need to look at strengthening the system as a whole, not just changes in individual classrooms or centers but raising the overall level.

Sharon Lynn Kagan: I appreciated having the opportunity to review these studies, but I do want to make full disclosure. As Ellen Peisner-Feinberg mentioned, I was a coprincipal investigator on the Cost, Quality, and Outcomes Study and, thus, will try to be as unbiased as I possibly can in making my remarks. I am thrilled that we have these studies and that we are beginning to focus on what happens to children when they transition into the early elementary school years, although we do need much more data especially for 1st grade because it is such a pivotal year. I would like to make one other comment. Peisner-Feinberg spoke several times about the difficulty of obtaining funding. As appreciative as we are of funding, it is also very important to fund these studies over time because there are essential gaps in the data. We feel badly about that, yet given the constraints, the Cost, Quality, and Outcomes Study did a rather remarkable job in a patchwork way.

I am always amazed at how much we expect children's early experiences will have on their long-term development. Part of this is a consequence of what we have done in appropriately massaging our data to make it render zing for us in the policy and money worlds. These studies, though, do once again confirm the importance of early childhood experiences, not only in Head Start or in laboratory or specialized settings, but also in conventional child care settings, which is where the Cost, Quality, and Outcomes Study took place. That does distinguish and lend more credibility to the data and to our work.

The other thing—and Rutter would be happy about this—is that both of these studies indicate that it is not only the nature of the child care experiences and the school experiences, but also the children's contexts, especially the parents and their perspectives on this. I want to congratulate both studies for reaching out and using multiple measures to collect these data.

We have a glass half empty, glass half full result here. The glass half full is that we see from the Cost, Quality, and Outcomes Study that, indeed, early childhood experiences and the quality of those experiences do make a difference over time, at least through 2nd grade. The glass half empty is—and we saw this in both of these studies—the profound consequence of children's social contexts and mothers' education. Indeed, when all is said and done, these are extremely powerful predictors in terms of what happens to children.

Let me say that the methods of these studies were different, and yet in each we are appreciative. I would like to congratulate Stipek, in particular, at the way she looked at social climate, teacher efficacy, and communication with parents. This is a welcome addition. Both studies used multiple methods, and we are to be encouraged by that. In addition, it is nice to know that in her study we have children from age 0 to 10, and in Cost, Quality, and Outcomes our children range from age 4 to 8.

With respect to the findings, in reviewing Stipek's study, it is compelling to see that children from families with low incomes and minority children, indeed, are getting very teacher-directed activities. I also would like to congratulate her because, perhaps unlike many in this country, she has been careful not to accept conventional pedagogy about what is developmentally appropriate and has tried to assume a balanced perspective. Thus, when we look at what constitutes quality we see an integrated perspective in her work. However, we still are faced with the reality that no matter what the definition of quality is, even if it is not only a straight developmentally appropriate quality perspective, we find that the lower the quality the more difficult it is for children to achieve gains.

We need to ask ourselves why it is that children from families with low incomes and minority children are getting very teacher-directed activities. In many cases, I would submit that this may be an artifact of what teachers believe is the best way to teach, and that there is a fundamental belief that children from families with low incomes and minority children will do better if they are in rigid, more calcified settings. It also may be an artifact of what parents desire for their children. We need to understand and perhaps promulgate more effectively are the findings about under what conditions children from families with low incomes do and do not prosper most effectively.

The second finding I would like to highlight is Stipek's finding about principals and their expectations for student achievement. We have always learned that principals were "supposed to be the instructional leaders in their schools," and, indeed, high-quality schools often were found to have educationally or pedagogically involved principals. It bespeaks the movement now in this country to have principals of schools and superintendents of school districts become "CEOs." Many of you are aware that Roy Romer, former governor of Colorado, is now becoming the "CEO" of the Los Angeles school district. It is quite an interesting movement in this country. It does say something, though, about the role of the principal and the need to have the principal not only be pedagogically involved, but also to set high expectations. From my perspective, the early care and education field is beginning to look more carefully at the nature of instructional leadership, even in child care, with the increasing amount of work in our country on director training and credentialing. These are signs that point to the importance of strong leadership.

From Stipek's work, we should not be surprised that children who enter 3rd grade with low skills and who are in low-quality classrooms are devastatingly affected. Indeed, perhaps the sad reality is that none of these findings is terribly surprising, not in any way to undermine the quality of the research. Sometimes, we need this kind of research to fortify our action, but it is certainly true that we have findings about which we should be distressed.

Turning to the Cost, Quality, and Outcomes Study, I would like to congratulate Peisner-Feinberg and the entire team, because when we embarked on this study there was some question in our minds about how durable and for how long we would see the effects of quality of care. The fact that we are finding effects through 2nd grade is powerful. It is also interesting to note that certain populations are more inclined to benefit from high-quality child care, notably those children whose mothers have lower levels of education. Again, the education effect is here. I also am impressed with the finding of teacher closeness and all the findings related to outcomes based on teacher-child relationships. In early care and education, we have known that for a long time, and it is wonderful that some of these efforts are penetrating into pedagogy and training for teachers of primary schools.

These studies together raise several conundrums. The first conundrum I will call the "where to put the money" conundrum, and it is a dialectic. We do understand that children from families with low incomes benefit most from high-quality early care and education. This is not new. We have realized this for decades. Nonetheless, the policy zeitgeist of this nation suggests that in order to serve children well we must, indeed, posit services that are universally available for all children. It bespeaks the reason why so many of our states have tried to fund universal pre-K, whatever that is—we all recognize that universal pre-K does not necessarily mean universal nor full-day programs, and so forth. The point is we must come to grips with whether we need targeted policies or universal policies, and how to totally reconcile that. We have all said over the years that we need universal policies with extra services for children in particular need. My hope is that more research studies like this will convince policymakers that this is an effective strategy. However, while simply moving to universal pre-K may mean more children receive the service, it may not necessarily mean that they are receiving the needed quality of service or that the service will be targeted to the children who need it. The other issue that we need to be cognizant of is the real reason we are all here, and that is Head Start. We do understand that the benefit of comprehensive services for children from families with low incomes is particularly profound, and that needs to be factored in.

The second conundrum that this raises is the "how do we teach best" conundrum. At a time when we so badly want all young children to succeed, the common perception in our country is that the best way to do this is by tightening standards, making curriculum more didactic, and specifying outcomes. Certainly, this is clear. We have a profound outcome and accountability movement that is characterizing all of education in this nation. We do need to pay special attention to the new report from the National Academy of Sciences that addresses the quality and nature of early childhood pedagogy, but the reality is that we also need to understand that finding a balance and agreeing on what that balance is, is the pedagogical charge that we must face as we move forward in the coming years.

This notion of developmentally appropriate—what is it, and how do we reconcile it with a much more didactic orientation—is very much on the table. I will speak for a moment from the NAEYC perspective. As an association, we are interested in how even the revised developmentally appropriate practices (DAP) are being received. Indeed, if one reads the document rather carefully, it does provide for a balanced approach to pedagogy. The reality is that to public perception DAP means play, play, play, and absolutely no basics. The association will be taking steps to rectify or alter some of those public perceptions. Nonetheless, they are real, and we have Stipek to thank for moving us to a more convergent definition of what is appropriate.

The next conundrum that I would raise is what I would call the "where to focus" conundrum. Do we focus on preschool, do we focus on primary schools, or do we focus on transition? For those of us who have been in the Head Start community for a number of years, the inclination is to focus on transition. Indeed, that is the theme of this conference and the theme of numerous demonstration studies. We have said that it is, indeed, those transition years that we need to focus on in order to assure children of continuity as they move from preschool to school. These studies speak to that importance, but they also underscore the need for not just high-quality preschool experiences, but also for high-quality pedagogical experiences as children make the transition into 1st and 2nd grade. We do much more research about the nature of quality in primary classrooms and the impact that it has on young children.

There is also the "how do we get the quality" conundrum. I am interested in this issue about teachers and staff that the field is facing now. We all are aware this is the primary crisis. Stipek's study pointed out that, indeed, teachers with more education seem to be doing better, and this seems to be the finding of a number of studies.

In its first recommendation, the recently released National Academy of Sciences report calls for all classrooms of young children to have individuals with B. A. degrees in them. This is rather a stark finding. It is not an uncontroversial finding. However, we must come to grips with this. How do we maintain the cultural diversity and pluralism of the teaching staff that now characterizes early care and education, about 70% nationally, with this press toward the need for a more and more educated workforce of early childhood educators? I for one am quite concerned. Nationally, the workforce in elementary education is only about 10% minority. We need to question seriously what a move to a B. A. credential is going to do in terms of keeping the doors of early childhood classrooms open.

All of this is saying we have crises in our field. Both of these studies point to those crises. On the other hand, the fact that we have rich data like the studies that were presented here will move us potently forward as we construct policies around teacher education and around the inclusion of the pedagogy in primary classrooms in particular.

AUDIENCE QUESTIONS AND COMMENTS

Edward Zigler: One of the things on which I want to congratulate both of these studies is that they are two of the most policy-relevant studies I know about in this country. Their nature supports what Rutter said at the opening of this conference, which is that the longitudinal study is not accidental, and these insightful studies are both longitudinal. The fact of the matter is there are many forces against doing longitudinal work. These studies are hard to do, and that is why you should be congratulated for doing them. The pressure in academia is for doing the quick and dirty study to build up one's publication list as rapidly as possible. Thus, it takes a certain amount of integrity to do the kind of work you have done, and you are to be congratulated for it.

I would like to ask one question, a policy-relevant question for Head Start, which I have been interested in for 35 years. If one goes back to the beginning of Head Start, there has always been a concern about the quality of the educational component from Omwake's criticism in "The

Legacy of The War On Poverty" and on and on right up to the 1998 Reauthorization when Snow of Harvard said that 50% of Head Start centers were so poor in the quality of their pedagogy that they were compromising children's literacy development—where that figure came from I am not exactly sure, but that is what she said. We have been hearing this and trying to improve it by doing a number of things over the years. One example is the Child Development Associate (CDA) training that we established to see if we could move parents into at least a semi-qualified position and then on to become head teachers in Head Start.

In the 1998 Reauthorization, the U. S. Congress has ordered Head Start to have at least 50% of head teachers have either A. A. degrees or B. A. degrees by 2002. Part of this question is directed at our discussant, Sharon Lynn Kagan, because I just had a discussion with her in my office a few days ago in which she called into question the wisdom of the 1998 Reauthorization. She has voiced it again today. Nonetheless, in both of these studies an empirical finding was that it is not the experience but rather the educational level of the teacher that is related to the quality. I would like all three of you to simply say in terms of actual policy in Head Start, how hard should we work to make sure that every teacher in Head Start has a B. A.?

Stipek: Kagan raised a very important dilemma. I do not think a B. A. is the answer. B. A. degrees do not bring training or ability to work with children; good mentoring does. There are a variety of ways that you can train and prepare people to be effective child care workers and effective early childhood educators. Certainly, I have seen some individuals with B. A. degrees come into my school who I have not thought were particularly good with children, but I have seen them grow and develop professionally under the mentoring of a good principal in extraordinary ways. We need to think broadly about the ways that we can provide professional development for people. Requiring a B.A. is an overly simplistic way and probably will not guarantee effective teachers.

Peisner-Feinberg: Basically, I would agree with what Stipek said based on the findings in our study as well. Different studies have found different effects for things like early childhood training versus formal education, and it depends on the way in which the data are cut and how it is distributed in the sample. However, we also found—and this echoes one of Stipek's findings —that the quality of the child care director's or administrator's involvement with what goes on in the child care center was also an important predictor. Thus, what one wants to do is improve quality. It is not any one of these factors alone, but it is the whole combination of factors. Certainly, recognizing that they have an effect is important. However, these are relations, correlations, and predictions; they are not perfect relationships. Thus, it is not the case that there are completely nonoverlapping distributions. I would recommend that we look more broadly at the whole variety of factors that are important.

Kagan: It is a Zigler question; he always gets right to the nugget of it. I have a research assistant who today is sitting at home culling all of the data, helping me come to grips with what I honestly believe. I want to disclose that at the beginning. Here is my dilemma: The National Academy of Sciences last week released a report from its pedagogy study panel, which looked at early childhood pedagogy and made recommendations. There are 19 of them. The first 7 are based on teacher credentialing and preparation of teachers.

Carollee Howes, Steve Barnett and I debated this very issue not 3 weeks ago. Howes arguably has done some of the finest research on this in the country since 1989 with her child care study. She and Barnett argue persuasively that, indeed, it is a B. A. that makes the difference in quality—not necessarily a B.A. in early childhood education, although some studies have shown a B.A. in early childhood and some have shown an A. A. in early childhood, but we do not have consistent literature on this. I argue that it may not be the B. A. per se that is making the difference, but that the B.A. may be reflective of a whole host of other socioeconomic status factors and variables that may be influencing the nature of teachers' attitudes and values. Therefore, we cannot only look at the B. A. as an independent item.

With regard to Head Start, which is Zigler's question, in this nation and in my heart, Head Start has a higher calling. It has a calling—and this is the heart of our discussion—that is about quality for children and families. It does that. However, it also has a calling about creating a better and more just and equitable experience for children. For me, as a former Head Start director, what is critically important about the program is that it does provide incredible opportunities for parents in ways that no other program does. Indeed, it is the benchmark program in this country. It is what Title I aspires to achieve. Indeed, it opens doors of opportunity for parents and for community people.

If this were an ideal world I would love for every person who works with young children to have a credential to work with young children. Indeed, this is what the Quality 2000 report called for. In my mind, that credential could be either a B.A. or an A.A. in early childhood. By that I mean every single person. We are a long way, however, from providing the money, the resources, and the access to the kinds of training opportunities that will make that a likelihood in the near future for much of the Head Start population. Thus, the question is, what do we do in the interim? We need a gradual approach, and if one reads the pedagogy report language carefully, it does not say that every classroom will have a B.A. That was the original language. However, it was edited to say that every group of children would have access.

What needs to happen is that we should have individuals with B. A. degrees available to all children in some kind of inventive staffing configurations—maybe two groups coming together through differentiated staffing patterns. This is sort of what Gwen Morgan calls for. This is by way of saying that this may be an interim to a day in time where we could have not just B. A.s in every classroom, but rather B. A.s that represent the cultural richness and diversity as well as the linguistic diversity of the children in the Head Start program.

Stipek: I just want to add that we must be careful about putting all of our concerns preservice. What makes a good teacher in an elementary school and what makes a good teacher in an early childhood program is someone who is developing professionally all the time and who is in an environment in which they are continually questioning, receiving mentoring, and having collegial conversations with others. To a substantial degree, what happens after the person becomes a Head Start teacher is certainly as important, and possibly more important than what kinds of skills or training they come in with. We need to be concerned not only with the precredential, but also with what kinds of opportunities for learning and support teachers receive for sharing ideas and developing professionally on the job.

Kagan: This issue about the difference of value added between preservice versus in-service education is also addressed in the pedagogy report and predicated on research on education for children in grades 2 through 12. The impact of preservice education actually, as the incoming dean of a school, is more profound than the impact of in-service, in talking about elementary and secondary education.

Question: Are you controlling for the age of teachers?

Stipek: We did not, and it is a good question. Age alone is not a factor because age is highly correlated with experience, and experience alone did not predict anything. It did not have a negative prediction, which is what you are sort of suggesting. However, it is something that we need to look at. Thank you for bringing it up.

Peisner-Feinberg: We also did not look at age. However, we did look at both experience and education. I am not sure now if it is this study or another one that I am thinking of, but we sometimes find negative relationships between the two of those. Thus, one sees people who have been in the field for a long time, starting a long time ago without the formal credentials, and newer people coming in who have the formal credentials. When it is broken out, we find that it is the early childhood training and the formal education, and not experience, particularly, that relates to quality.

Question: Are there data linking the credential with child outcomes?

Stipek: At the elementary level our degree differences are basically Master's degree versus Bachelor's degree. It is a different set of issues. Kagan is probably right that to a substantial degree, the predictor of the Master's degree has something to do with the persistence, devotion, and commitment of the teacher. It turns out to be somewhat of an index of a whole array of motivational and other kinds of qualities as opposed to a cause in and of itself, although presumably when one obtains a Master of Education degree one learns something about education.

This issue of elementary education preparation and how it applies to early childhood is important. However, it should not be important, because I would argue that good elementary education is child-centered, child-focused. It has all of the same qualities of good early childhood education. However, that is not necessarily what has been promoted in elementary education in the past. It is in the good places that people are being trained to be elementary educators, but it has not been the primary orientation.

Peisner-Feinberg: If I understand the question correctly, when I talk about early childhood training we are talking about things such as a CDA credential or an A. A. degree in early childhood. It is formal training. It is not in-service training that we are talking about as being a predictor. The formal education and the early childhood focus are each important factors.

Also, similar to the point that Stipek was making about elementary school, one looks at things like teacher wages in child care. Someone who has a B. A. going into child care is giving up a huge amount in terms of the income that could be earned doing something else. Thus, clearly, there are many other reasons why people are choosing to go into that as opposed to doing something different. Thus, it is a marker variable, perhaps more than just the fact of what one is learning by getting that degree.

Kagan: We are so preoccupied with supply and demand when we talk about child care centers. The reality and a little sequelae of the Head Start legislation that people may not be aware of is that the inclusion of the demand for A. A. degrees has actually given rise to a burgeoning number of new A. A. programs in early childhood around the country. There has been a paucity of appropriate programs, but this very legislation has led to the development of new A. A. programs, and I presume new B. A. programs will come forward as the demand creates it.

Stipek: There was a question about standards. I am going to take off my hat as a data manager and put one on as someone working with teachers and doing a lot of work on standards. The point made is right on target. It is a serious problem. However, it does not necessarily have to be a problem. Standards do not necessarily translate into ditto sheets. In fact, if one looks at the subject matter research on math and literacy, one finds that children do well on standardized tests with the kind of child-centered, learner-centered instruction that all of us promote. However, that is not what teachers feel and believe, and that is not how it gets translated. Thus, in effect, the standards do not necessarily lead to that kind of instruction.

For example, I was in a 2nd grade classroom in which a large proportion of the children were doing written math assignments, such as two plus three—just a whole series of calculation problems that is commonly seen. I walked around talking to the children, and it was clear that many of them did not have basic one-to-one correspondence. They did not understand what two meant or what three meant, although some of them had picked up a few things that they were able to perform. Nonetheless, for the most part they could not answer the questions. It was because of a fundamental lack of understanding of numbers. I asked the teacher why she did not have the children counting beans and buttons and using the kinds of manipulatives that children need to learn to develop a concept of numbers and one-to-one correspondence. She said, "Oh, they do that in kindergarten. Moreover, when they take the standardized test in 2nd grade they won't be counting beans and buttons." It took me a long time to convince her that counting beans and buttons would actually get them to perform better on the standardized test, which the research clearly shows. However, it does not look like the standardized test.

Therefore, a teacher who is not well-trained and who does not have a good understanding of child-centered, learner-centered learning does not see the connection between beans and buttons and doing well on those kinds of tests. In effect, it gets translated into bad instruction, but not necessarily so. The children in my school get learner-centered, child-centered instruction and do phenomenally well on the stupidest standardized tests that you have ever seen.

Peisner-Feinberg: I will share another study from our Head Start Quality Research Center that makes the point about the link between what the standards are and people understanding the implementation of those standards. In the 1st year of the Quality Research Center, we did focus groups with Head Start teachers and parents. One of the interesting findings was that the parents were saying they wanted their children to learn the ABCs, numbers, and so forth. The teachers said that the parents want them to do this, but they were not allowed to teach those things anymore. That was their understanding of what it means to have developmentally appropriate practices—not that they teach these things in different ways, but just they are not allowed to do that anymore. Thus, there was a real disconnect on the part of the teachers between what the standards were intended to mean and their understanding of how they should be implemented in their classrooms. Added to that mix are the parents being dissatisfied that their children are not learning the kinds of things that they want them to learn. There is partially a parent education issue there as well that needs to be addressed.

Question: Were there any differences in quality between the for-profit child care centers and the nonprofits?

Peisner-Feinberg: In our study, we found that there were no significant differences in quality between the for-profit and the nonprofit centers, except in North Carolina, which had the least stringent regulations. Our interpretation of that finding is that to some extent it depends on what the baseline level allowed by regulations is.

As I said, when broken down by state, there is a significant difference. Within each of the sectors, there are three types of groups. In the nonprofit sector, there are independent nonprofits, church-sponsored nonprofits, and public nonprofits. In the for-profit sector, there are independent centers, local chains, and national chains. The church nonprofits, which in places like North Carolina are exempt from certain licensing regulations, look like they belong to the for-profit sector. If we pull those out, then we get a significant difference.

There were differences in the structure between nonprofits and for-profits. For example, in nonprofits, a much higher percentage of expenditures went to labor costs—teaching staff wages and so forth—than what was found in for-profits. On the other hand, they also had a higher proportion of donated costs. They could put more into things like teacher wages because they were getting space that was donated, whereas the for-profits had to pay for that. However, overall, the quality was not different. Another interesting piece is that on average the profit margin was not different between the for-profits and nonprofits. It was about 4% in both cases.

Question: What about teacher expectations?

Stipek: More than teacher expectations, it is the quality of instruction. We have just begun to play around with this. This is fairly preliminary but is a major question of this study. Keep in mind our data analyses only go through 3rd grade. We just had our first cohort of children enter 5th grade this year, so we have not done any data analysis on 5th grade. Thus, I am only talking about kindergarten through 3rd grade.

We have been contrasting models, and I will just speak of two models. One is what we call the launch model, which was coined by Ellen Skinner. Using HLM techniques and growth curve analysis, the launch model is essentially a sensitive period model in which kindergarten and first grade are viewed as particularly important for setting the child on a pathway. There are many different ways that we have talked about this. Then we contrast that with what we call the change-to-change model, which is "where you are is what you get," so to speak. In other words, it suggests more power in some respects of any particular teacher in any particular year. In the analyses that we have done so far focusing on social skills, engagement, and a little on learning, the change-to-change model has come out consistently with much more support for that than the launch model. This is tentative because we are just beginning to do these analyses, but to some degree, therefore, these findings are optimistic in the sense that at least through 3rd grade teachers have a lot of opportunity to have a major impact on children.

Contrary to that, however, are the findings of the effect of K-1 instruction on learning. The best predictor of how much children learn in kindergarten and 1st grade was their PPVT scores. In fact, it washed out everything in terms of our quality measures. Thus, essentially what a child went in with is what he or she came out with in the kindergarten and 1st grade. In the 2nd and 3rd grades, we started getting much more powerful effects of the instructional environment as a predictor for how much children learn.

It is a mixed message. On the one hand, what children come in with is important. On the other hand, teachers do have a good opportunity to make a difference for children. When we get the whole picture, we are going to have some evidence for both the launch or snowball model and the opportunity for change model, which is not a surprising message to have. However, we need to be careful to think of the sensitive period as something that is in children, and how they enter somehow makes a difference in how much they are able to learn or soak up.

We institutionalize the stability of children's pathways to a significant degree. When children come into 1st grade with low skills, they are put in the lowest reading group. We know that in the lowest reading group, most of the evidence suggests that children do not get as good instruction. Not only are they with other low readers, but also the actual quality of the instruction is compromised. When children come in with low skills, teachers have lower expectations for their learning, which gets translated in a variety of ways in terms of their learning opportunities. Thus, we have to remember that this is something we do to children to a substantial degree. I went back and looked at some of Benjamin Bloom's early literature, and one gets the sense that children can only learn as much as they have already known, as if their knowledge somehow limits their capacity to learn more. That is not as much what is going on as that our environment responds in a variety of ways to what children come in with. Thus, we create, to a substantial degree, the pathways or the stability of the pathways that children are on.

The Impact of Gender on Learning and Achievement

CHAIR: Cynthia Garcia Coll
PRESENTERS: Jacquelynne Eccles, Mark Innocenti

Cynthia Garcia Coll: As chair of this session, I am introducing our two presenters Jacquelynne Eccles and Mark Innocenti. Jacquelynne Eccles has been incredibly productive in developmental psychology in areas that have to do with schooling, achievement, motivation, and transitions to school. Today she will talk to us about findings that reveal not only gender differences, but also the context of these gender differences and their importance in terms of development.

She is a professor at the University of Michigan and chair of the MacArthur Network on Successful Pathways Through Middle Childhood. She also chairs one of the study panels of the National Academy of Science on Adolescence that focuses on successful community programs within communities that promote adolescent development.

Mark Innocenti is Associate Director of the Early Intervention Research Institute at the Center for Persons of Disabilities at Utah State University. He is also a Research Associate Professor in psychology at the College of Education, Research and Evaluation Program. He will be presenting an evaluation of the long-term effects of Head Start that shows some powerful gender differences.

Jacquelynne Eccles: I want to present some results of a longitudinal study that is following one group of children since they were in the 6th grade, and another group of children since they were in the 1st grade. I am going to talk about gender differences in three domains: mathematics, English and sports. I will argue that sports are just as important as math and English, and certainly of direct relevance to what is happening early on in Head Start.

I am also going to argue that we need to start early in boys' and girls' lives in order to get both boys and girls involved in a broader array of activities. Parents are extremely important in this function, and one of the things that Head Start can do is to make it clear to parents the importance of involving their sons and daughters in a wide array of activities that in fact will have implications for their performance in school and their performance in out-of-school skill-based areas, such as sports.

While I am focusing on sports, I think our work also generalizes to instrumental music or to other kinds of out-of-school skill-base domains where children acquire a variety of skills, not only the skill that they are learning in that setting, but also a variety of skills like how to relate with others, how to deal with achievement, how to motivate themselves, how to maintain attention, et cetera. These are very important for both boys and girls.

Let us start with math. Females are less likely as adults to go into areas that rely on math-based skills, areas like engineering and other technological areas. What is interesting is that females are not less likely to go on in math per se, either in high school, college, or as professional adults. If one looks, for example, at the proportion of Bachelor's degrees in the United States in mathematics that have gone to women, it is one of the least sex-typed areas.

Throughout this century the proportion of females with Bachelor's degrees in mathematics directly reflects their presence in the college population.

So where are women missing? They are missing in engineering, physical science and information technology. The National Science Foundation has gotten very interested in why women and minorities are missing. Interestingly, most of the gender differences also apply to minorities as well. Therefore it is in areas of applied mathematics, not in pure mathematics itself that we see the differences. These differences have persisted for as long as we have been keeping records.

There are also gender differences not only in those areas, but also across a whole array of occupations. The common perception is that things have changed dramatically in the last 20 years with the women's movement, but in fact, they have changed a little, but not dramatically.

In 1980, the career choices of young boys and girls, kindergarten through 12th grade, are sex-typed across all ages. Males were more likely to want to be truck drivers, professional athletes, policemen, firemen, join the military, scientists, engineers, and computer scientists. Females wanted to be nurses, models, and teachers. In 1980, we saw very stereotypical occupational choices.

Ten years later you gets a similar scenario. There has been some increase in girls' interest in typical male areas, but there is still, tremendous sex typing.

Although we have not conducted the same study in 2000, others' data looks very much the same.

These differences are also true among highly gifted children. For example, the Terman study recruited gifted children in California early in this century, and followed them throughout the century. Findings included that the gifted females were far less likely to go on to get advanced degrees. They also were more likely to be located in female-type occupations. So there were these two differences: extent of training and sex-typed occupations. In that generation the females that had good mathematical skills became math teachers.

That is less true today. Women who are good in mathematics go into business. They are not going into computers, medicine, or law.

A Johns Hopkins study of a gifted population now in the young college years is finding more females interested in physical sciences, but a tremendous gender difference still exists. Therefore we have gotten females more interested in these areas. For example, the proportion of female engineering B.A.s has gone from 3 to 15%. That is a big difference, but it is still a very small proportion of the population. There are many more females who have the potential.

Now, what about sports? You can tell the same story in sports. Females are less involved than males. You might say, why would we care about sports? We have been doing a longitudinal study following children since they were in the 6th grade. They are now in their late 30s. We have been able to follow them to see whether or not being involved in sports actually makes a difference. In fact, it makes a tremendous difference, particularly for girls.

The data I will talk about control for all kinds of family background characteristics. They also control for standardized tests of ability. The 9th grade children get the Differential Aptitude Test in both math and reading. We are looking at whether or not they were involved in competitive team sports. This can be a swim team or gymnastics team. By team we simply mean they are competitive and organized. The data shows that females and males are clearly more likely to have achieved a Bachelor's degree by age 24 if they were involved in sports. In addition, by the time they are 24, females who participated in sports in high school have attained more education in general.

Let us look first at income. Both males and females who participated in sports in 10th grade are making more money by the age of 24. The characteristics of their jobs are also encouraging. At age 24, if you are a female and you played sports you are much more likely to be in a career-building job with some autonomy and working in areas that you are good at.

I would argue from these data that it is just as important to get girls involved in sports, as it is to get girls involved in mathematics. Both of these things seem to pay off for them in the long run in terms of adult success. Both are areas where early on you can make a big difference. Programs like Head Start could in fact launch boys and girls on a trajectory that would increase their involvement in areas like mathematics, as well as athletics.

Now, what are the common explanations for these gender differences? For mathematics, there is always a biological explanation and you could imagine there is one for sports as well. There is an attitude set of clusters. Lower confidence, greater anxiety, and less interest may prevent women from participating in these areas, as well as differential experiences in home and school.

There has been a history of looking for biological origins to explain why men are more involved in mathematics. A very circular set of arguments appear. For example, there was a belief that men's brains were less lateralized than women. So it was said that men go into engineering, because in fact you need a less lateralized brain. It turned out that men have a more lateralized brain than women, so the explanation now is that men go into engineering more than women, because you need a more lateralized brain to do that. So this type of reasoning has been part of the history of explaining gender differences.

In 1980, my colleagues and I produced an extremely useful model. We tried to think about mathematics as a choice behavior. All of us are making decisions as to how we want to spend our time. For young children this decision is often made by their parents. The same dynamic operates in parents or teachers making these decisions for children as well as children making decisions for themselves.

The best psychological predictors of these choices are two psychological variables: expectations for success, and what we call subjective task value. Most parents and teachers will give children tasks that they think they can succeed at, and not ones that they think that they will fail at. If gender role socialization leads boys and girls to have different views of what they are good at, then we would expect boys and girls to make different choices on how to spend their time, whether or not their beliefs are true.

The second area, and the one that we have gotten more interested in is what we call subjective task value. It may play a very pivotal role in how young boys and girls choose to spend their time, and how their parents choose the kinds of experiences they provide for them. It is important to consider all of the other socialization influences that feed into these two beliefs, to put this whole system into a larger cultural context. We think that these expectancies and values are being influenced by things like self-schema, gender roles, affective memories in a situation, interpretation, and adults behaviors around children.

Subjective task value is comprised of four constructs. The first is utility value: the usefulness of a set of skills for something beyond their intrinsic value. If I do this, do I get praised by the teacher? Do I get praised by my parents? Does it help me meet some other long-term goal that I have? Does it make my friends like me more or less? When you do any kind of activity it usually has some utility value that is separate from the activity itself. The second one is the one we are usually most interested in and called intrinsic or interest value: the enjoyment of doing the activity. Doing the activity itself can be fun, or aesthetically pleasing. You might gain a sense of competence out of it or some other kinds of intrinsic characteristics. When educators try to create tasks for children, we often rely on these two motivational components. We either tell children, " Do this because you're going to be tested on it on Friday," which is an example of trying to stress its utility value, or we try to create a situation in which the task is fun, enjoyable, or interesting to keep the children motivated.

The third construct is cost. Any time you do a task it has costs. An economist would say that opportunity costs, but the kind of costs that have been looked at in the psychological literature are psychological costs. These are things like fear of failure, fear of success, fear of social consequences, that if I do this people will not like me. "If I do this I might fail and then I will feel badly about myself." It may include anticipated anxieties. "I really don't think I can do this well and therefore I think I will be quite anxious. It will make me physically upset." Economic costs would be linked more to parents at this age, or to school districts. They make decisions: we are going to dump the sports program because it costs too much. Time and energy costs must also be considered. No matter what you do it means you cannot do something else. If children spend time on X, they cannot spend time on Y. So there is a cost to making any kind of choice.

What we are more interested in of late is what we call attainment value, the fourth construct of subjective task value. This is where gender becomes very interesting. Tasks take on value to the extent that they allow the individual to manifest a central part of their identity. Growing up, we come to have a view of who we are and who we would like to be. That is being structured and socialized by every message you get out there in the world: teachers, peers, television, and so forth. Everything that children are exposed to is feeding into children's view of who they think they are and where they think they are going: who they would like to be when they grow up.

Activities can be consistent and congruent with attainment value, meaning, "If I do this it proves to myself and to others that I am this kind of person. If I think I am a nice person and I want to be a nice person, then helping out little animals proves to me and to others that I am a nice person." So tasks can reinforce or prove to yourself and others that you are a certain kind of person. On the other hand, engaging in a task can prove that you are not the kind of person you want to be. You are going to avoid those tasks that make you appear not to be the kind of person you would like to be.

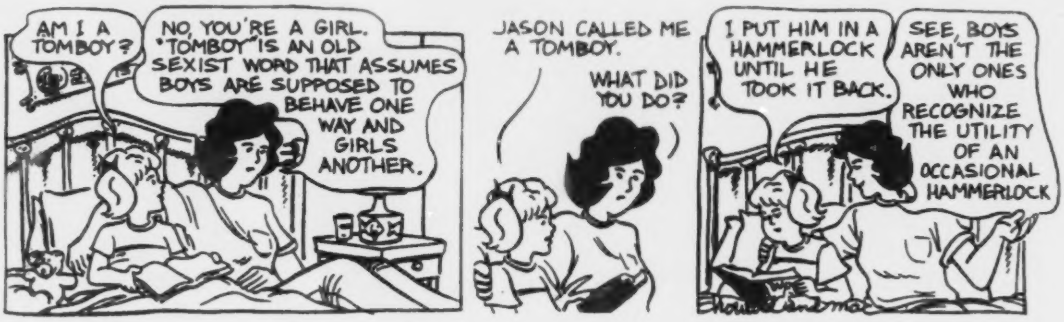
Gender is all about defining what you are to be a good person. I would argue that the same thing is true for ethnic identities. These social and personal identities are about defining your ideal kind of person. What ought that person do, what ought that person look like, what ought that person's characteristics be? Activities provide the physical objective setting in which one can carry out these characteristics.

Now let us think about gender for a minute and how that might map onto that. Gender is all about these kinds of things. Gender is related through hierarchies of core personal values, for example, whether you are concerned with social goals or concerned with power and achievement. Typically, social goals are part of the female identity, and achievement goals are part of the male identity.

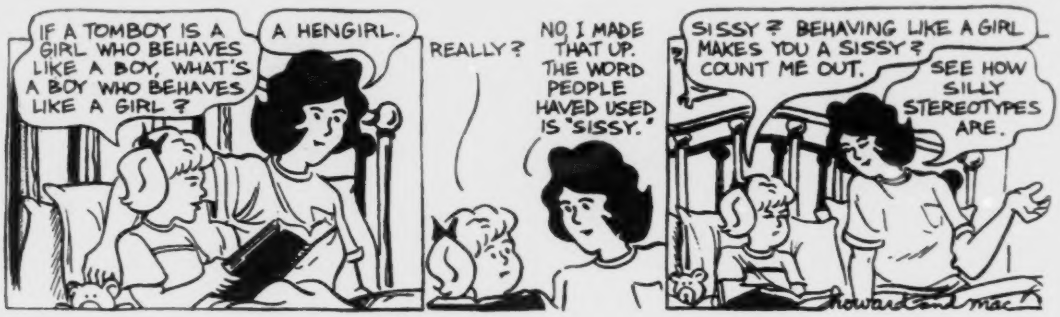
Another example is your interest in things versus your interest in people. This is evident in 3- and 4-year-olds. I have a grandson who spent all of his first 5 years playing with trains. He had no interest in people other than us very much at all, but he was fascinated with trains, cars, and mechanical objects. I think if I had a granddaughter it would be very unlikely that she would be interested in that. She instead would be interested in a variety of other things having more to do with people and interpersonal relations. There are lots of studies to document that.

Another typical gender division is interest in cooperation versus interest in competition. The literature also points to the density of the hierarchy as being affected by gender. The distinction is between singlemindedness versus a diverse identity. For instance, do you place value on being an expert or being a jack-of-all-trades? We tend in this country to socialize males towards becoming experts and females towards being a jack-of-all-trades. That is a big difference if you are heading for a Nobel Prize. You have to be very singleminded to be heading towards a Nobel Prize; you have to be very singleminded. If you have been trained to be a jack-of-all-trades, you probably are not going to make it because your life then is about balancing a variety of values and goals.

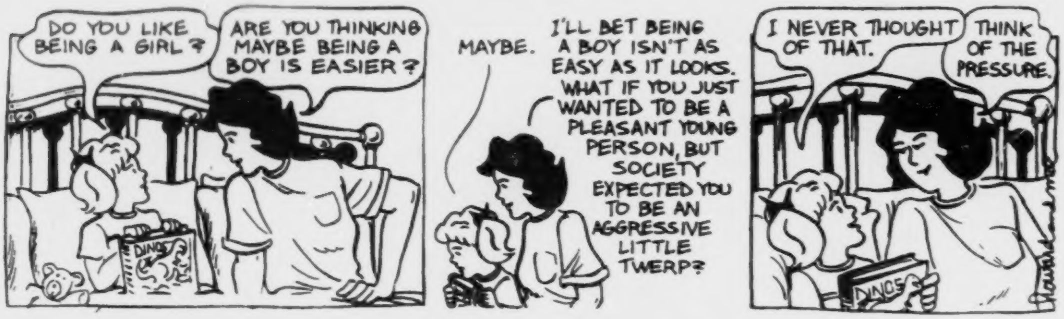
Let me again illustrate this with a set of cartoons. (See cartoons below) This is a discussion between Sally and her mother. She says, "Am I a tomboy?" "No, you're a girl. Tomboys is an old sexist word that assumes boys are supposed to have one way and girls another." "Jason called me a tomboy." "What did you do?" "I put him in a hammer lock until he took it back." "See, boys are not the only ones who recognize the utility of an occasional hammerlock."


AM I A TOMBOY?
NO, YOU'RE A GIRL. "TOMBOY" IS AN OLD SEXIST WORD THAT ASSUMES BOYS ARE SUPPOSED TO BEHAVE ONE WAY AND GIRLS ANOTHER.
JASON CALLED ME A TOMBOY.
WHAT DID YOU DO?
I PUT HIM IN A HAMMERLOCK UNTIL HE TOOK IT BACK.
SEE, BOYS AREN'T THE ONLY ONES WHO RECOGNIZE THE UTILITY OF AN OCCASIONAL HAMMERLOCK

The conversation goes on to the next day. "If a tomboy is a girl who behaves like a boy, what is a boy who behaves like a girl?" "A hengirl." "Really?" "No, I made up that word. The word people have used is sissy." "Sissy. Behaving like a girl makes you a sissy. Count me out." "See how silly stereotypes are."


IF A TOMBOY IS A GIRL WHO BEHAVES LIKE A BOY, WHAT'S A BOY WHO BEHAVES LIKE A GIRL ?
A HENGIRL.
REALLY ?
NO, I MADE THAT UP. THE WORD PEOPLE HAVED USED IS "SISSY."
SISSY ? BEHAVING LIKE A GIRL MAKES YOU A SISSY ? COUNT ME OUT.
SEE HOW SILLY STEREOTYPES ARE.

And then it goes on for one more day. "Do you like being a girl?" "Are you thinking maybe it's easier to be a boy?" "Maybe." "I'll bet being a boy isn't as easy as it looks. What if you just wanted to be a pleasant young person, but society expected you to be an aggressive little twerp?" "I never thought of that." "Think of the pressure."


DO YOU LIKE BEING A GIRL ?
ARE YOU THINKING MAYBE BEING A BOY IS EASIER ?
DINOS
MAYBE.
I'LL BET BEING A BOY ISN'T AS EASY AS IT LOOKS. WHAT IF YOU JUST WANTED TO BE A PLEASANT YOUNG PERSON, BUT SOCIETY EXPECTED YOU TO BE AN AGGRESSIVE LITTLE TWERP?
I NEVER THOUGHT OF THAT.
THINK OF THE PRESSURE.
DINOS

Essentially what I am arguing is that there are experiences, stereotypes, and social beliefs that feed into these personal and social identities. Personal identities are the things that make you different from everyone else. Social identities are the things that make you like other members of your group, so gender would be an example of a type of social identity.

Let me go on to some data. I am going to be talking about two studies. One we call the Michigan Study of Adolescent Life Development (MSALD). They have now become adults. This study was conducted in southeastern Michigan in the districts that surround Detroit. If you know something about that area you can imagine it. It is not suburban. It is made up of small industrial cities. They are mostly working-class, middle-class communities. It is where the auto industry is. We were in 12 different school districts. First I am going to talk about attitudinal differences and then I am going to talk about parents and their role.

We chose the sample on the basis of their interest in mathematics. We chose only those children who were already on track and could take a college preparatory sequence. They could take four years of high school math going through calculus if they wanted to. They were not gifted, but they were in the top 25% of the class. They were clearly identified as having the math competence at 6th grade to be able to go all the way through in mathematics.

I am presenting data on their estimates of their own ability and their subjective task value, for mathematics and for English. I chose English because I think that if you are thinking about male and female differences as a choice that the individual makes, then the important comparison is not boys versus girls, but within-girls, choices between sex-typed and non sex-typed activities. Math and English provide a nice comparison for within-boys as well. We found that in the 5th to 7th grades there was no difference in the boys and girls in this sample. We are still following this cohort therefore the data will be a little different than the data I am going to present to you next.

There was no difference in the concept of their math and English ability within-gender, and there was no gender difference. There also was no subjective task value difference between- and within-gender.

By 10th and 12th grades when they are starting to make real choices about whether to go on in advanced mathematics or not, girls clearly think they are better at English than they are at math, and we have absolutely no evidence to support that inference. This population has made A's in both subjects all the way through. The same thing holds for subjective task value. There is a clear within-gender difference. Girls think English is more important than mathematics and that mathematics is less important.

Now, with boys the subject matter difference is not there. Since English is an area where females do better than males and the evidence shows that this difference emerges very early on, you might think there is an objective difference to explain why boys think they are better in math than in English and why girls would think they are better in English than the boys. That evidence does not emerge in the data. Plus, there is no subject matter difference among the boys. Therefore, boys as a population are reaching the 10th to 12th grades still equally likely to pick mathematics as a domain to study as English. Females have been tracked as a population away from math, even though there is no evidence that they are either less good in math than they are in English or that they are less good in math than the boys. What about sports? You get exactly the same difference in sports across all of these beliefs. Girls think they are less good in sports, and that sports are less important and less interesting.

Are we correct in our assumption that this makes a difference? Well, in this population it turns out that girls are amongst the honor students. Even looking at the very top of the population, and not the whole population, these very top girls are less likely to take advanced honors math courses than boys. This is the only time we find a difference. It does not occur until the 12th grade, and it occurs in advanced honors math courses, and the numbers of math courses that they take. Math aptitude makes a difference. That is what you would expect. However it is attitude that mediates the difference between gender and course taking. The data show that there is a gender difference in self-concept of ability in math. Boys think they are better than girls, boys are more interested in math than girls, and boys think math is more useful than girls. In fact, these three attitudes completely wipe out the relationship between gender and the outcome.

So it has nothing to do with the aptitude difference between the boys and the girls; it has to do with these beliefs. Most importantly, for the argument I was making earlier, it has to do with utility value of mathematics. How useful do they think math is for their future? I argue that they have already reduced the value of mathematics for a variety of reasons. Their parents have told them it is less important. Their counselors have told them it is less important, and they have already ruled out occupations that require it. So before they even know anything about these occupations, they are ruling them out as a possible area to go into. We have the same data for physics. But given the time, I am not going to present it.

For sports, you get exactly the same picture. Gender, in fact, relates to participation in sports at both the 10th and the 12th grades. This difference, in fact is largely mediated by the fact that girls think they are less good in sports, they think sports are less useful, and they like sports less than males do. Therefore, if we intervene early to address these beliefs, we should be able to increase the participation of girls in sports.

What if you go earlier? When do these effects emerge? In a second study that we have done, we have been following a group of largely middle-class White children in a community where their families had the money to in fact enroll them in lots of activities. We did this on purpose because we did not want money to be a factor in this study. We wanted to then see whether or not families still differentiated by gender.

In 1st and 2nd grade, children told us how good they were in math, reading, sports, tumbling, instrumental music, and social skills. Girls think they are less good than boys already by the 1st grade. In reading they think they are equal, even though that is the only area where there is any evidence that the girls are in fact doing better. In sports there is a big difference between boys and girls. In tumbling, it turns around. Girls think they are good at tumbling, but interestingly, we find that these children think of tumbling as a social activity, not an athletic activity. So even though the girls are getting this feedback and are acknowledging they are good in tumbling, they are not generalizing that into an image that says, "I'm good at athletics." They are generalizing it into an image that says, "I'm good at social skills." Girls think they are better at instrumental music in the 1st grade than boys. Teachers and parents think that also. Again, there is no evidence to support this, because this school does not introduce music until 5th grade. Very few of these children have had any experience at all in formalized instruction, but the children believe it, the teachers believe it, and the parents believe it.

Why do you think that is? It is attention and patience. When we went back and asked why parents think girls are better at instrumental music, the first thing parents said was, "I didn't say that." When we explain that it is not them in particular, but on average, parents said girls are better at instrumental music, they came right out and said that you cannot expect a boy to learn to play the piano in 1st grade. They do not have the patience, diligence, motor skills, and so forth.

The data on worry about performance reveals that girls are more worried about math, and a little bit more worried about reading than boys. They are more worried about sports, though less worried about sports than academic subjects. They are very worried about not being liked and hurting other people's feelings. Already in the 1st grade girls are more worried about competence in these domains.

The data on enjoyment reveal that boys and girls like math the same. Now, that is encouraging. Girls do not think they are as good as boys, but they like it. Girls like reading a lot more than boys do, boys like sports a lot more than reading. Both boys and girls like sports a lot more than they like mathematics. Girls like music more than boys. Again, even though they have not done it, they are very willing to say, "Yes, I'd really like to play the piano." In this population, 5% of the children are getting music instruction at this age. In the importance children place on these subjects, you again see the standard stereotypic differences.

If you follow these children across time, what do you see? We now have data on these children from the 1st to the 12th grade. In the 1st grade, girls start school thinking they are not as good as boys in math, but over time, rather than this difference getting bigger, it gets smaller. That is good news. Essentially, as the children are going through school, girls are getting some information. They get better grades than boys do all the way through. That is true in every study that looks at this. However, both boys and girls are being less optimistic about their abilities as they get older, but girls are catching up with boys. Both boys and girls think that math is of less value the older they get, and in fact, there is not much of a gender difference.

What about language? In reading, it turns out that over time both boys and girls go down in their beliefs about reading, but boys go down more than girls. Boys finally do figure out that they are not doing quite as well in reading as girls are.

Gender differences start out getting smaller, and then expand again as the children go towards high school. In both math and reading, the confidence in their ability drops across the school years and beliefs in the value of the activity drop across the school years. The same downward trend applies to sports. The biggest differences are when children start school and they become less over time.

In thinking about Head Start, it means that for children leaving the preschool period, these gender differences are most extreme, rather than least extreme. In these preschool years, actually there is a lot of room for influencing these differences.

We have tried to think about what the role of families are and what roles can families play in this. One of the things that we found is that the parents, like the children, have these gender differences in their beliefs. Very early on the mother and fathers of these young children already have the same view of their children's abilities as the children themselves. These differences translate into the kinds of experiences that the parents provide for their sons and daughters.

By the 1st grade, we are finding that parents are more likely to be engaging their sons—if they have sons— in activities related to athletics and in activities related to math. They are more likely to be involving their daughters in things like reading. For example, we have found that parents spend more time reading with and reading to their daughters than to their sons. They spend much more time engaged in physical activities with their sons than with their daughters, and much more time with their sons doing sports than doing reading. So they are more likely to be spending their time with their sons doing non-academic related activities and with their daughters doing academic-related activities, particularly reading.

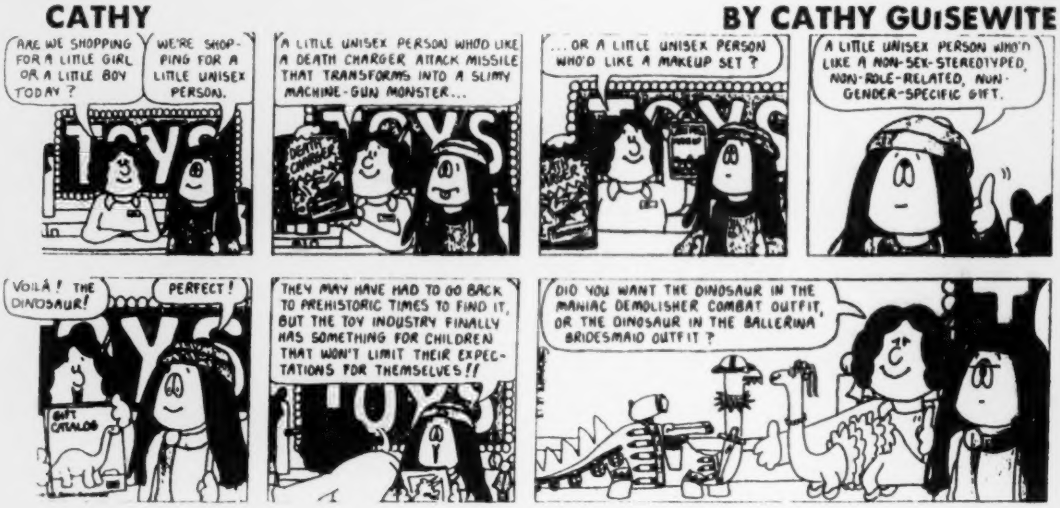
We also have asked them how good they think their child is in the subject area, and how important it is to them that their child be good. Again, these data are controlling for everything we can about how good the children actually are. We found that children—either boys or girls—whose parents think that they are better at math, of the children who were lucky enough to have parents who thought they were good in math in 1st grade, independent of how good they actually were, show a less steep decline over time in their confidence in their ability in math compared to the children who have a parent who thinks they are not as good. Now, it turns out that if you are a girl, you are more likely to have parents who think you are not as good. This holds up for sports as well. It also holds up for sports interest and for sports self-concept. For example, those children whose mothers think they are better at sports maintain a higher interest in sports than those children who do not. This is equally true for boys and girls, independent of how good the children actually are. Therefore, if you can impact on mothers' beliefs about how good their child is you can have a big impact on the child's self-concept, on the importance that the child attaches to it, and on the likelihood of the child being involved.

Let me just end with one more set of data and then a last cartoon. We then looked within the homes across the array of things that parents could do to provide experiences for their children in math and in sports. That would include reading to them about it, buying them books, signing them up for camps, and doing these activities with them. We accumulated the number of different things parents were doing to facilitate their child's interest in math or in sports.

We plotted the number of things the family is doing, from zero to four or more different ways they are trying to encourage their child in math, broken down by gender. The families that are providing three, four, or more activities are more likely to have sons than to have daughters in math. Families are, in fact, doing more for their sons in math. The effect is even more marked if you go to sports. Families are much more likely to be doing nothing to encourage sports if they have a daughter than if they have a son. They are more likely to be giving three or more opportunities for their sons to be engaged in sports than their daughters. None of this has to do with parents trying to undermine their children. It all links back into a much larger societal issue that tells parents, or tells all of us, what is important for boys or girls. The problem is ubiquitous. And I just want to give you a cartoon to illustrate that, and I will end with this cartoon.

This is a "Cathy" cartoon (see below) about how hard it is to actually engage in some non-stereotypic socialization. Cathy's friend has had a baby, and Cathy goes to try to buy the baby a non-sexed type toy. "Are we shopping for a little girl or a little boy today?" "We're shopping for a little unisex person." "A little unisex person who'd like a death charger attack missile that transforms into a slimy machine-gun monster, or a little unisex person who'd like a makeup set?" "A little unisex person who'd like a non-sex-stereotyped, non-role-related, non-gender-specific gift." "Voila - the dinosaur." "Perfect."

"They may have to go back to prehistoric times to find it, but the toy industry finally has something for children that won't limit their expectations for themselves." "Did you want that dinosaur in a maniac demolisher combat outfit, or the dinosaur in a ballerina bridesmaid outfit?"


CATHY
BY CATHY GUISEWITE
ARE WE SHOPPING FOR A LITTLE GIRL OR A LITTLE BOY TODAY?
WE'RE SHOPPING FOR A LITTLE UNISEX PERSON.
TOYS
A LITTLE UNISEX PERSON WHOD LIKE A DEATH CHARGER ATTACK MISSILE THAT TRANSFORMS INTO A SLIMY MACHINE-GUN MONSTER...
DEATH CHARGER
...OR A LITTLE UNISEX PERSON WHO'D LIKE A MAKEUP SET?
A LITTLE UNISEX PERSON WHO'D LIKE A NON-SEX-STEREOTYPED, NON-ROLE-RELATED, NON-GENDER-SPECIFIC GIFT.
VOILÀ! THE DINOSAUR!
PERFECT!
GIFT CATALOG
THEY MAY HAVE HAD TO GO BACK TO PREHISTORIC TIMES TO FIND IT, BUT THE TOY INDUSTRY FINALLY HAS SOMETHING FOR CHILDREN THAT WON'T LIMIT THEIR EXPECTATIONS FOR THEMSELVES!!
DID YOU WANT THE DINOSAUR IN THE MANIAC DEMOLISHER COMBAT OUTFIT, OR THE DINOSAUR IN THE BALLERINA BRIDESMAID OUTFIT?

You may remember the recent controversy over Mattel's Barbie dolls that said "I don't like math." Of all things they could give this Barbie doll to say, why would someone come up with, "I don't like math"? There was a huge protest. In fact, it was the Europeans who saved us. They essentially said unless you guarantee us that you will not send us a Barbie doll that has that statement in it we will not import any Barbie dolls that talk. Mattel would not withdraw the product because of the protest from the women's movements in the U.S., but when it became economic they withdrew it.

Let me end with this. For an alternative suggestion that we could have on what Barbie might say, Mattel announced plans for a talking Ken doll that will say, "Barbie, let me put my career on hold and work at a dead-end job until you complete your education, and then if you like, you can leave me for a younger guy."

Question: How old are the children you studied now?

Eccles: They are 18 now. Every time we have gone back we have found the effects still there. So I do not think they have disappeared. We are seeing more girls in sports now than twenty years ago, but we still are not seeing the majority of girls in sports. Girls still are reporting that they are less likely to pursue sports and that they feel less competent than boys.

Question: Your data on reading to the children, where parents read more to girls than to boys, how old were the children?

Eccles: This was when they were in the 1st grade. As they get slightly older, it is having them read to the parents. You still find parents engage in reading activities more with their daughters than with their sons. By the 3rd grade, parents are beginning not to do that with children very much at all. During the early years, it looks like parents begin by reading more to them and then by listening to them by having the children read to them.

The data shows that parents who believe their children are better at a particular activity will have children who themselves come to believe that they are better at it, and they are more likely to be engaged. I think that is going to hold up across all populations.

The extent of the gender differences is going to depend very much on regional activities. Communities can have an impact on this. Countries can have an impact on it. The data are going to hold up across ethnic groups as well. We are trying to look at it in ethnic groups, and see whether in fact, these sets of mechanisms could well explain socialization that goes on across the groups.

We were in a community where the parents were not restricted financially. If you are in a community where they are restricted financially it is even harder for parents to give their children these opportunities and I would expect then the sex typing to become even bigger. My main point is that it depends on whom the parents think they should be investing in.

Question: You indicated that you controlled for sports aptitude?

Eccles: Yes. We measured that with the Brigance Diagnostic Inventories and another instrument that taps both fine motor and gross motor skills. It is a test that taps a variety of motor skills, including sports-related skills and dexterity.

Question: Did you also control for the number of opportunities they had within the school and within the community?

Eccles: That did not vary. I think it does dramatically in other communities. I would argue that if we can increase these opportunities, we can make it easier for parents to provide them for their children, and then you will see fewer differences. It will be easier for the parent to buck the stereotyping. Those are intervention implications that are very much related to our data.

Question: Even though your model basically is designed to fit all children, and it helps to explain some of the gender differences we see at a certain time point, have you run the model on boys and girls separately to see if there are different salient characteristics for certain aspects of your model?

Eccles: Yes

Question: By gender?

Eccles: Yes. Depending on the population, we find some differences, but the bigger story is we do not find very big differences. It is very clear that boys are more keyed into actual performance in coming up with their self-concept of abilities and their values than girls are, in our data sets. But once you get to the predictors, it looks pretty similar for boys and girls. You can get slight differences if you run a sophisticated multigroup LISREL, but the story is basically the same.

Question: What about the gender of the math teacher?

Eccles: We have a lot of data on teachers as well. We do not find that teacher's gender has an effect. We thought we would find that, but we are not finding it too much. The teacher data is older, but what we see is a different reason for similar behavior in male and female teachers. The teacher behaviors that facilitate girls' involvement in math are also the behaviors that facilitate boys' involvement. If we want to increase the involvement of boys and girls in either sports or math, we would make the same recommendations. A teacher needs to control the class and not let the children dominate. He or she needs to make sure everybody participates. In many classrooms, the teacher calls on the children that raise their hands. White boys are much more likely to raise their hands, especially smart White boys. A very limited group of children tend to dominate these math classrooms. If the teacher lets that happen, then the children who are not as willing to play that game or who are girls or who are minorities, are more likely to sit there and be passive recipients. Involvement in math increases when teachers require that everyone participate, when teachers form close personal mentoring relationships with the children, and when teachers teach in a way that is practical and the lesson's value can be seen easily.

Male teachers have talked to me about not being able to form this kind of mentoring relationship with girls in high school because they have to worry about being accused of sexual harassment.

The female teachers give a different explanation. They say, "We don't have to worry about girls; they are good students. They do well in school. They are going to go on." That is true, they just do not go on in these fields. They say, "What we have to do is worry about the boys." From the female teachers, it is more a nurturing maternal kind of explanation, that they have to take special care of the boys.

Mark Innocenti: The data I will present can be seen in the context of Eccles' work dealing with older children. My work involves a Head Start population and just a little beyond Head Start. My background is not in gender differences, so Eccles' talk provides a good context. I changed the title of my presentation from "Examining predictors of gender-based differences" to "Longitudinal outcomes of Head Start children: Examining gender-based differences." As I talk, it will be understood why I changed the title. My colleague on this project was Matthew Taylor, who was not able to be here today.

My background is school psychology research evaluation rather than development. I have been doing intervention research for a long time. The area of gender differences was never one of my main emphases. However, after working with this data set, I have changed my mind about the importance of looking at gender-based differences in our research.

The project I will talk about is called the Head Start Success Study. It had a more formal title at one point, but Head Start Success Study was one that the parents we were working with liked. It was funded by the U.S. Department of Health and Human Services, Administration for Children, Youth and Families, Head Start Research Bureau, a few years ago. It was a 5-year longitudinal, nonexperimental project that followed 248 Head Start children and their families enrolled in three cohorts across successive years. We went as far as the 3rd grade for the first cohort, but we ran out of money and were not able to keep the sample going. The study was primarily conducted in Salt Lake City, Utah with one overarching organization that had control over all the Head Starts.

We have an abundance of data on child, school, maternal, and family variables—more than I can talk about at this time. The original intent was to determine how Head Start intervention might be strengthened to best meet the needs of families and children. The study focused on identifying relationships among variables that addressed the larger questions of "What works best for whom?," and "What variables are associated with initial and continued success?"

We studied three cohorts: (a) Cohort 1 entered Head Start in 1992, (b) Cohort 2 entered Head Start in 1993, and (c) Cohort 3 entered Head Start in 1994. We did a pre- and postassessment in Head Start, as well as an assessment toward the end of the 1st grade for all three cohorts. We also have data for Cohort 1 in the 3rd grade. Data collection ended in 1997. At entry, the average age of the children was a little more than 4½ years, and 48% of the sample was male. Half the group was White, about a quarter was Latino, and the rest was a mix of different ethnicities, which is a true representation of Salt Lake City.

The Woodcock-Johnson Achievement and Cognition Tests showed that most of the children scored lower than average: 43rd percentile for achievement, and 26th percentile for cognition. Their school readiness skills rated in the 21st percentile. Social skills were also low at the 32nd percentile. Meanwhile, the children rated high in problem behaviors at the 75th percentile. Low scores also were found for interpersonal skills (36th percentile), social skills (32nd percentile), and work-related skills in school (35th percentile). We took some information on temperament as well, and again, from a percentile base there were low scores for distractibility (32nd percentile) and persistence (25th percentile).

We also looked at family issues, keeping in mind that Salt Lake City is sometimes considered a different population base. The children in the study came from homes with an average of approximately three children. The families are a little larger than average, which tends to be true in Utah overall. Eighty-nine percent of the families said they spoke primarily English at home. We were not able to verify that, and, in some cases, it was questionable because we did a lot of Spanish language testing. The incomes averaged approximately $12,000 per year, which is par for Head Start. In the sample, 65% of the families had both a father and a mother, whether it was the biological father or not. This percentage is a little higher than in some other Head Start samples. We looked at a lot of other family characteristics. The families tended to be low in resources and high in life events. Stress levels on the Parenting Stress Index were high, though not exceptionally high. The families fit the overall profile for Head Start families nationwide.

The average age of mothers was 30. This was an older set of mothers than found in Head Start programs overall. Everyone reported that they had a high school education: either a diploma or the GED. The mothers in our sample worked an average of 12 hours a week and were higher in stress than the norm. On the personality assessment, the mothers tended to be higher in neuroticism and a little lower in agreeableness and conscientiousness. We also used the Otis-Lenon Mental Abilities Test as a proxy for intelligence. It is an older test that is group-administered and easy to give. Mothers scored at the 35th percentile on this test.

We also looked at father information, although not all the children had fathers, and sometimes even when there were fathers, it was impossible to get information about them. Fathers were, on average, 34 years of age with a high school education. They reported working about 35 hours a week. We also looked at father personality variables, although they were harder to get. Interestingly enough, the fathers' personalities matched the mothers' personalities well. On the personality assessment, they were a little higher in neuroticism, lower on agreeableness, and lower on conscientiousness than the norm.

We took a lot of child measures. I will focus on the Woodcock-Johnson Cognitive Test and the Woodcock-Johnson Achievement Test, because this is where we found differences. We also have a lot of social skills data and information on schools.

We pretested a total of 248 children. We lost 29 children during the Head Start year, so at posttest, we were down to 219. At first grade, we were down to 146 children. We have a history of working with children with disabilities where we hardly lose anybody, and so this was fairly large attrition from my perspective. By the 3rd grade, we have only 36 children in our sample, which, again, only includes Cohort 1. However, this is something to keep in mind as we go through the data.

We did attrition analyses looking at the 1st grade. We thought we would have differential attrition and lose the most at-risk families, those who had more stress, lower incomes, and more risk factors overall. However, this was not the case. We did not find a difference in terms of attrition on any of the measures. The sample is still statistically representative of our initial population although the numbers at the end are a little lower. We also did attrition analyses on the 3rd grade group with respect to the original Cohort 1, and again, there were no differences there. This was the first of a number of surprising findings.

In terms of gender differences, we looked at a number of major areas by boys and girls. For the cognition scale, we used a battery within the Woodcock-Johnson that is designed for younger children. The cognition skills are traditional I.Q. items, such as memory for alien names and generalization skills that involve learning new skills and using them to solve new problems. The knowledge subtest measures knowledge of world events, historical people, and places. It is information one receives from one's environment and has a variety of levels. The school readiness subscale involves combined math and reading skills. We also have information on social skills and problem behaviors from the teacher and the parent.

The first surprise was the scores. My original expectation was that girls would do better than boys and that this would change over time. However, from pretest to posttest, and from 1st grade to 3rd grade, the boys' scores increase steadily, whereas the girls' scores are more variable. It is the same with the knowledge scores and the school readiness skills. Boys' school readiness skills especially show this increase, whereas the girls' scores rise in the 1st grade only to drop back down in the 3rd grade. These are overall mean data.

Another interesting finding was that both boys' and girls' social skills, from a teacher perspective, continued to remain low as far as the 3rd grade. Problem behaviors also remained high in the 3rd grade for both boys and girls. These scores were higher for girls than we had anticipated.

We did a number of different analyses to see what was going on here. The first was to look at pretest scores and ask whether there were statistically significant differences to start with. Looking at the *p* values of boys and girls, there were no differences on cognitive skills, although the girls were primarily higher than the boys on the pretest. There was no statistically significant difference on knowledge skills either. There was a statistically significant difference with school readiness skills: the girls were doing better at pretest.

Using the 1st grade sample in an analysis of covariants with the pretest scores as the covariant, we again looked at whether there was a difference in any of these three areas: cognition, knowledge, and school readiness. In the 1st grade, we found highly statistically significant differences. All of a sudden the boys are doing better in all categories than the girls. We did the same thing with the 3rd grade group, which is a smaller group, but, again, we found statistical significance in all three areas. Once again, boys are doing better overall.

We also did a slope of the scores since we had multiple data points. It was not the largest sample in the world, but a good sized sample. Essentially, we took the test scores and plotted a slope, using the slope as an outcome measure as opposed to using the actual point in time score. This provides a different way of looking at change over time. As opposed to an absolute number at any single point in time, this lets one know how children are doing across a span of time. It is a basic form of growth curve analysis doing just a straight-line analysis. For example, with a test such as the Woodcock-Johnson that has a standard deviation of 15 points essentially, a slope of 1 would signify a gain of 15 points, a whole standard deviation point.

In looking at cognitive skills, again, there is a statistically significant difference between boys and girls. The boys' slope is .3, and the girls' slope is .08; a fairly big difference. The slopes for knowledge scores are also statistically significant. Girls have an overall negative slope, with scores going down over time. Boys have a small, but positive uphill slope. The data on school readiness indicate a positive finding from a Head Start perspective. For school readiness, the slope is about 4.0 to 4.5 for both boys and girls. This is not a statistically significant difference between the groups. Both are making good progress on their school readiness skills over time.

Again, the differences between boys and girls are striking. In terms of cognition, there was a statistical difference between the boys and the girls. The plot of slope scores for cognition shows that the boys' mean is at the 75th percentile of the girls' mean slope. There is about the same amount of variability. However, the boys' scores are clearly higher, and one does not need a statistical analysis to see the difference. One can just look at the data and see a major trend at work.

Even more impressive are the boys' achievement slope scores measuring general knowledge of the world, which is not only higher than the girls' scores but the variability in scores is much less than the girls'. Again, the boys' mean slope is about at the 75th percentile of the girls' mean slope. The boys tend to be more consistent. With the school readiness skills, both the boys and girls are fairly equal. Both groups have similar amounts of variance.

We began to think about what might predict these differences, so we did a number of correlations. We searched through the data and took 38 other variables to see what might be going on. We found that correlations changed over time. Of the 38 variables, we took the ones that came out at .05 or better in terms of their probability value. None had outstanding correlations; there were no single variables that stood out. Most were lower level correlations. However, there is a difference in the number of significant correlations for boys versus girls. On average, there were about two significant correlations for girls for every one significant correlation for boys. Thus, something is going on because variables are correlating more with the girls' changes over time. It is also startling that there was almost no overlap in the variables that were correlating for boys and for girls. Mothers' I.Q. levels and some mothers' personality variables come up, but overall there were not a lot of similar variables.

We wanted to do some modeling, but we did not have huge samples to deal with when the data were separated by boys and girls. Thus, we did a regression model, looking at the significant correlations and building a model that made sense both theoretically and based on the available data. We put into the model academic accomplishment, which comes from the Social Skills Rating Scale, a measure of the teacher's perception of the child's academic skills. We included a family resource scale and a measure of maternal mental abilities, which is essentially a proxy I.Q. measure. We also used maternal conscientiousness, which is one of the personality variables that was strongly associated. We used parent involvement in the program, which came out frequently as an issue. We also used child activity level, based on the temperament scale. Finally, we used the Social Skills Rating Scale itself, which looks at the child's overall social skills from the teacher's perception.

Using all these different variables, indeed, there is an overall adjusted R^2 of about .22 for scores at 1st grade for females. This is an average of the adjusted R^2 for cognitive skills (.262), knowledge (.218), and school readiness (.189). They are all statistically significant. For boys, there is an overall adjusted R^2 of approximately .19, averaging cognitive skills (.179), knowledge (.256), and school readiness (.123), which are all statistically significant.

This model is not predicting a lot, but none of the models in this business ever predict a lot. One sees some differences between girls and boys and with how much is being predicted. Again, it is all statistically significant.

Looking at change over time, the slope of scores, which is perhaps a more critical measure in some respects, none of these variables is statistically significant for boys. The model with all these different variables was unable to predict anything for boys. For girls, the results are not as strong as they were for the point in time data. There are statistically significant outcomes for cognitive skills and knowledge, although the adjusted R^2 values are small. The variables do not predict a lot of variance, but they predict somewhat. It is apparent that something is going on.

We played around with some of the other measures here to see what we could and could not predict, and there are continued differences that stand out. Thus, at any point in time, one can say these variables are impacting on the girls, or these variables are impacting on the boys. However, in looking at change over time, one can predict to some degree with the girls but not for the boys with these variables.

That is why I took out the "predictors of" part of our title, in that we were not able to predict anything for the boys when looking at change over time. This was surprising because we did look at a lot of variables. We will be doing further analyses with the data, but I will conclude this presentation with the following summary.

Gender-based longitudinal differences were found in cognitive and academic skills, with boys performing better than girls. Meanwhile, Eccles presented data that showed girls at every age level doing better. Our data with a Head Start sample showed the boys doing better than the girls over time. This relates to some of the issues she talked about.

At 1st grade, this difference was approximately one fourth of an effect size (4 points on the test) but approximately half of an effect size (8 points on the test) by the 3rd grade. It is not known if this trend would continue, and the small size of the 3rd grade sample is a limitation. However, if this trend did continue, since 3rd grade is one of those critical points in the school career, it would have some major implications. Unfortunately, I do not have the data to address this.

I spoke with Suzanne Randolph, who is also doing Head Start research with a similar population, and she is finding similar kinds of gender differences. Thus, there is some indication that this may be going on in other Head Start sites as well.

Looking at static scores versus change over time is important. Variables that predict an outcome at one point in time were similar for boys and girls, but variables that predict change over time are different for boys and girls. That speaks to the need for more sophisticated analyses in our research. Growth curve analysis would be perfect, if there were more data. It would have been worthwhile with the size of this study, if we had been able to maintain it.

Girls' longitudinal cognitive and academic skills appear to be affected more by maternal, family, and environmental contexts than do boys' skills. The families still remain at-risk overall. They are still high-stress, low-support families that are not making a lot of money even at the 3rd grade assessment. It seems that all these factors have more of an impact on girls than on boys.

Eccles' point about expectations is relevant to the kinds of data to be obtained in future studies. We need to look at how some of those issues may be impacting children's learning and achievement. What are the parents' values and feelings about what is happening? Are they telling boys that they can do a good job and telling girls that they cannot?

We also do not know whether these findings are unique to the Salt Lake City data set or whether they have large implications. However, again, Randolph is finding similar trends. It makes sense to look at some of the other longitudinal data that exist to see if it is indeed true or if it is merely an idiosyncratic finding.

Question: The model that you used combined a number of different variables. Would it also be possible to use a model that had only a couple of variables that the boys were most affected by?

Innocenti: We picked a combined model on purpose to look at variables that seemed to impact both boys and girls. We have not done separate models for the boys and girls. We could do that and probably would be able to come up with something because we have enough variables.

Comment: It just seems that with so many variables, they were canceling each other out.

Innocenti: Yes, but in all cases, there were correlations. We tried to pick the variables that made the most sense theoretically as well as those that had strong correlations overall. Thus, based on the way we tried to construct the model, it should have given us the "best bang for the buck." However, again, there could be separate models for boys and girls. That would be an interesting finding as well, although we have not done that.

Question: What are your intuitions as to why there were different kinds of predictions by gender? Why is it that you were not able to predict change over time in boys whereas you were at least able to do that to some degree for girls?

Innocenti: That is a great question. I found this whole data set puzzling. I was wondering when Eccles was talking if this difference relates to some of these other variables about expectations in the home, the messages that girls and boys may be receiving from their parents.

Comment: Is there less of a connection between what parents are doing and saying with boys at home and what is going on in those Head Start centers? If in fact there is, then maybe that is the reason you are not finding that connection with their trajectory in school because they are in a different milieu that is having its own effect. Somebody has written about this connection between schools and families, examining whether there is a greater differential with boys. I do not know that there is, but if so, maybe that is part of the difference.

Innocenti: At the 1st grade level, we did a values-based evaluation. It is not the strongest psychometrically, and I did not use it in this evaluation, but it does provide us with some general information on what parents think their children are going to be doing later in life.

Comment: If in fact parents are reading more to girls, and doing many things of that nature, and then they go into a Head Start setting where they are starting to do more activities of that nature, then all of this relates motivationally and attitudinally in terms of skills. Again, if there is a greater disconnect or less connect between the experiences of boys in their home and in Head Start, maybe that is part of the reason we are not seeing as much prediction in the trajectory.

Innocenti: The other thing that came to me while Eccles was talking is the issue of girls making different career choices early in their school career. If parents are orienting their girls toward being a model, a flight attendant, or whatever the case may be, perhaps they are not stressing academics as much over time.

Comment: The girls are modeling after their mothers, and because they are Head Start mothers, they did not achieve their goals through college and graduate school. The girls are following their mothers even if on the surface the mothers are encouraging them to read.

Eccles: It could be both what you are saying and that teachers at this age are attuned to boys and think it is the boys they have to worry about more than girls. They are not paying attention to the fact that the girls are running into trouble. There is also a gender difference with respect to who they think has more social skills. This again is odd. It could be that parents are more likely to put boys in Head Start and more likely to keep girls out, which would lead to differential entry in Head Start.

Question: Did you look at ethnicity differences?

Innocenti: No, we have not at this point. If we did look at ethnicity, the only real breakdown would be White versus Latino because these are the only groups with sufficient numbers. The numbers for the other ethnic groups are much too small in this sample.

Question: How might the cultural context in Utah as a state impact in terms of an increase in female stereotyping?

Innocenti: We did get information on religiosity. We looked at both formal church attendance and general religiosity issues. The mean was right in the middle. People considered themselves moderately religious. Looking at the breakdown in religious affiliation, the majority was affiliated with the Mormon Church at 53%, which was also the percentage of our sample that was White. It is not a one-to-one ratio, but it is probably fairly close.

Comment: I have been working with Head Start and non-Head Start early childhood programs for years, and it always strikes me when I go into a class with 3-year-olds and see gender differences. One sees it in the choices people make: who is in the dramatic play area, who is in woodworking, and who is in blocks. One thing that I am increasingly interested in—and there has been a lot of discussion at this conference about early attachment—is looking at what goes on from birth and how we hold and talk to infants based on their gender. I am interested in belief systems that are much more subtle than we look at otherwise. What sort of studies are you aware of that look at what happened during infancy and how that correlates with later development?

Eccles: There have been a lot of attempts to try to look at that, and there are some mean differences, but mostly the differences are not large. It could be that small initial differences can essentially start people on a different trajectory that becomes exaggerated due to a variety of factors later on. It has been found that, starting early on, mothers are less likely to treat children differentially than fathers.

Mothers seem to respond more to the characteristics of the infant rather than the sex of the infant. They are both responding to the characteristics of the infant, but fathers are more influenced by the sex of the infant. Fathers tend to play more with sons than daughters and appear to be less interested in daughters.

In terms of early attachment research, there is no good data that show that boys and girls are attaching to their mothers differently, but that could be due to the fact that mothers are treating them more by their characteristics. There are not many studies of fathers with their children. People spend a lifetime trying to mine this particular area, and it has not been as productive as one would like and expect.

Innocenti: One of the things to potentially look at are the Early Head Start studies that are taking place right now. Most of these do have some kind of attachment relationship component as well as looking at how children are doing over time. That is a rich source of data that is emerging. We will be able to address the Head Start population in a little more detail. It probably will not answer all the questions, but at least it will answer some more questions.

Eccles: There is also some interesting data coming out, not on Head Start, but on the various welfare-to-work programs around the country. One thing they are finding is it is having a differential impact on families of sons versus families of daughters. People are given resources for after-school programs for older children and for Head Start for younger children, and this tends to benefit boys much more than girls. Families are more motivated to put their sons in those kinds of programs. It could be they are more worried about their sons. It could be that their sons are more difficult to deal with, so to get them out of the house, they enroll them in programs. It could also be that they are investing more in sons; that sons are considered more valuable than daughters. We do not know. Probably all of those dynamics are involved for different families. However, parents who are taking up those offers are more likely to have a son than a daughter. That is true across all ages, or we suspect it is true on the intake for Head Start samples and other kinds of supplemental programs.

Coll: In looking at both of these studies together, I am concerned by how early on we are seeing these differential tracks. The only area where Innocenti did not find any differences is in school readiness, which is good, but in the other areas there are differences by 1st grade. By 1st grade, there are also differential expectations for self, from the parents, and from the teachers. What are the implications of that? What do we do in terms of Head Start? What do we do in terms of teacher training or Head Start staff training? This is disturbing for all of us who want to put children on the same track from the beginning, irrespective of gender, ethnicity, and so forth.

That is the big question. I have a student who did an honors thesis 2 years ago in a school where they had a switch day in prekindergarten. On switch days, the boys were forced to play in different areas. They were not allowed to play in their usual areas. She found that the girls started using Legos a lot more. This allowed them to come in without the boys there. Then, when they were in free play, they would self-segregate again. However, looking at the self-segregation, the switch day had an incredible impact on the girls' play.

It was interesting, and this was only once a week. She looked at play preintervention and for 3 or 4 months during the intervention. Thus, there might be some simple things that we can do during the preschool years to start working with parents, caregivers, and the children themselves to shift some of these preconceptions.

Question: How did it affect the boys?

Coll: It did not affect their play. When their play was proscribed, boys were able to go back and forth from one area to the other with no hesitation. However, when play was free they would self-segregate immediately. It was interesting.

The Early Childhood Longitudinal Study: Design and Early Findings

CHAIR: Rachel Chazan Cohen

PRESENTERS: Nick Zill, Elvie Germino Hausken, Kristin Denton, Amy Rathbun, Rachel Chazan Cohen

Rachel Chazan Cohen: I am pleased to welcome you to "Early Childhood Longitudinal Study: Design and Early Findings." The Early Childhood Longitudinal Studies-Birth cohort is a longitudinal study of a nationally representative sample of 12,000 children, and ACYF is funding a substudy addressing the observed quality of child care settings, including care for children from families with low incomes.

From this study we will learn about the quality and stability of care that eligible children are getting in the absence of Head Start. For the total sample in the birth cohort, ACYF has also added questions to the parent interview about child care choices, which will be very helpful in providing information for Head Start enrollment.

The ECLS-Kindergarten (ECLS-K) cohort is a study of 22,000 children who were enrolled in kindergarten in 1998, and we added a verification of Head Start participation. This methodology allows us to make more accurate comparisons of Head Start and non-Head Start children, both within ECLS-K and in our studies.

Elvie Germino Hausken will provide an overview of the design and methodology of ECLS-K, and then she will address the inclusion of language-minority children and children with disabilities.

Elvie Germino Hausken: The ECLS, Early Childhood Longitudinal program, is an overlapping two-cohort design. The Birth (B) cohort will follow infants from 9 months to at least their 1st grade year. The kindergarten (K) cohort is following children from kindergarten through 5th grade. Together these two cohorts will provide nationally representative data on the status of our nation's children before they come to school and how early childhood programs and schools influence their lives.

These longitudinal studies are designed to provide detailed information on children's health, early care, and home and school experiences. These two studies are general database type studies that permit a lot of analysis for researchers and policymakers.

Data were collected twice during the kindergarten year and 1st grade year. Data were also collected at four points in time for the K cohort. Teachers were asked to describe their classrooms themselves as well as to rate the children in their classrooms. Data are collected through a variety of ways: self-administered questionnaires, computer-assisted interviewing, and personal and telephone interviews.

The ECLS-K would not have been possible without the support and collaboration of numerous agencies including the Department of Education's Office of Special Education Programs which supports the Special Education component of the study, the Department of Education's Planning and Evaluation Service which supports CORE study questions on issues of Chapter One or Title One school participation, and the Office of Bilingual Education and Language Affairs which sponsors and assists in the support of the language minority assessment procedures. NICHD supported the reading component for data collection during fall of 1st grade. ACYF and the Head Start Bureau are supporting the Head Start verification component. The Department of Agriculture, Economic Research Service, has questions and items in the study on children's height and weight, food adequacy, and participation in government or social welfare programs. NCES takes the lead here and on other education components.

The ECLS-K will provide a national dataset to understand or examine children's status in kindergarten. The data will describe children's experiences in kindergarten and growth from kindergarten through 5th grade. The data will allow analysts to test hypotheses and examine the effects of a range of family, school and community, and individual variables on children's success.

The major areas of interest are: (a) school readiness as it relates to parent and teacher expectations; (b) child behaviors; (c) skills at entry; (d) school and classroom activities; (e) policies for enrolling children; (f) transition outcomes; (g) relationships among the home, classroom, and school; (h) the relationship between the kindergarten experience and school performance in 1st through 5th grades; and (i) the growth of academic skills and social-emotional behaviors.

In the fall of 1998-99, data were collected from parents, children, their teachers, and school administrators for the whole sample of 22,000 from about 1000 public and private schools. In fall 1999, 25% of the children and their parents participated in a direct assessment and parent interview. The last two collections planned are for spring 2002 when the children are in 3rd grade, and spring 2004 when the children are in the 5th grade. At each of these collections, children are administered a direct assessment, parents are interviewed by telephone or in person, and teachers and school administrators are requested to complete self-administered questionnaires.

Children are the focal points or units in this study, so they are followed from one school to the next. In the base year, the sample consists of 1,018 schools and 3,305 kindergarten teachers. This is a representative sample of kindergarten teachers, as teachers who did not necessarily have children in this study were asked to complete questionnaires about themselves and their classrooms. There are almost 21,000 children and over 20,000 parents participating.

The theoretical framework reflects a theory that is based on a systems theory or a belief that in order to understand children's development, one must understand the relationships of the numerous different environments where children are raised and are growing: (a) child and home, (b) the care and education programs they attend, (c) the schools they attend, and (d) the neighborhoods in which they live. In these multiple contexts it is also important to understand the continuities and discontinuities of these environments with each other, culturally as well as physically.

The resulting framework requires data collection from numerous people, so multiple sources, stages, and areas are the components. We also collect information from the business managers or administrators on salaries of the principal and the current teacher, as well as a rating of the school physical facility in terms of its age, its overcrowding or quietness, or its cleanliness.

The child's participation in an assessment of their cognitive skills, specifically reading, mathematics, and general knowledge in kindergarten is a large part of the study. Parents as proxies provide much of the information about the activities in which the children participate: (a) their child care or early care program participation; (b) their current participation in any of these nonparental programs; and (c) their own family expectations and environments. Teachers are also asked a number of questions. One type of question focuses on how they feel about the school, while another gives us an indication of school climate. This information has been difficult to attain because of the length of the questionnaire.

The philosophy is to include all children, and we follow specific procedures and operations to include language-minority children and children with disabilities. Every child was sampled with the exception of those who lacked parental permission.

The study utilizes both direct and indirect assessment batteries. The direct is more salient in relation to children with disabilities in language and language-minority children. The direct assessment is individually administered using computer-assisted technology in a one-on-one assessment approach. The assessor reads the questions and potential answers to the child. Some of the responses of the items are on an easel for the child to see. The only time the test administrator does not read the answers is when the reading assessment is administered.

In math, though, this testing method is very important because the items or word problems are read to the child and visibly shown to the child using the easel. It is adaptive in that a routing test is used to determine what level test the child goes to. This reduces the amount of time that the child has to be tested in order to find a ceiling.

In reading, there are 20 items in the routing test and 16 in math and general knowledge items. Children are given breaks whenever they feel they need one. The test is flexible and not timed—essentially the children are given as much time as they need as long as they are not showing a lot of frustration. If the teacher says it is better to take Susan at a certain hour, our staff would take Susan at that time.

Language-minority status of a child is identified from data that are either taken from the school's home language survey record or from a teacher. We then administer the Oral Language Development Scale (OLDS), which is a short form of the pre-LAS-2000 and LAS-pre-LAS. The English or Spanish versions were given, and depending on their performance on the OLDS, the children take the English ECLS-K battery or they take a Spanish translation of the math battery.

In addition, the children are given a fine motor test that includes an assessment of copying, drawing, visual motor, and some gross motor skills. Their heights and weights are also taken. For children who are non-Spanish-speaking or other language-minority children who do not pass the Oral Language Developmental Scale, we just take their heights and weights.

For children in special education or children with disabilities, accommodations that are used in the classroom are also allowed in the test session. In addition, personal aides are allowed during the testing if they are used in the classroom. If an accommodation is not used in their daily learning program in the classroom, we do not provide it. Whatever the child has in their class is what we allow in the assessment center.

Most of the time there is little need for accommodations because the assessment is administered on a one-on-one basis. For children who cannot be totally assessed or who have Individual Education Plans (IEPs) that restrict their participation in standardized-type testing, we ask the teachers to complete an alternative assessment relating to specific domains of the adaptive behavior scale.

During the initial testing, the child's primary language is first identified. If the primary home language is not English, they take the English OLDS. Based on their performance on the English OLDS, they either go through the English Battery, or if they are Latinos, they take the Spanish OLDS and go to the Spanish battery of instruments. If they are non-English and non-Spanish speakers, we take their height and weight only.

In the data collected during fall of kindergarten, 15% of the children spoke a language other than English in the home. Nine percent spoke Spanish, and 6% spoke a non-Spanish, non-English language. Forty-one percent of students who spoke Spanish in the home took the English assessment. During the spring, this number increased to 60%.

Each time data are collected, the OLDS is re-administered to the children who did not previously pass. The percent of children receiving the Spanish assessment typically decreases. For example, 59% of children in the fall collection received the Spanish assessment, while 40% received the Spanish assessment in the spring. As children learn English, they do not need an adaptive-type assessment. For the children who do not speak either English or Spanish at home, the percentage who did not pass the OLDS decreased from 38% to 20% from fall to spring. As time passes, more and more children are going through the regular ECLS-K battery route.

Less than 1% of children with disabilities were excluded for both fall and spring assessments. The slight decrease from fall to spring is insignificant. Overall, very few children with disabilities were excluded from the study, with speech and communication disabilities being the largest group.

Question: How old are the children in the study?

Hausken: All these children are kindergartners, ranging in age from 4 to 6 or 7 years. It is a nationally representative sample of the population of kindergartners.

Question: Did you anticipate the number of children with disabilities at around 7.5%?

Cohen: It is a probability sample without quotas.

Hausken: We did not oversample; we just took what was out there.

One point of clarification is that we have not yet had a chance to look at the data regarding whether the child has an IEP at the end of this year or had an IEP when we went in, in the fall.

Question: Do you have some idea as to how representative that proportion is to the national sample that is served?

Hausken: We have not had an opportunity. I think it is fairly close.

Nick Zill: This is not quite representative, although probably some of the other estimates are not as good as this one because it is such a good sample of kindergartens nationwide.

Question: Is it more likely to be a high or a low variance from the national?

Zill: I do not think it is either. It is not likely to be the correct estimate, but it will be a chance to compare what parents have to say with what the school has to say on the official IEP diagnosis. They are both sources of information.

Hausken: We are still looking at the data. Some children had not yet been identified in the fall, but they were going through the process. This information is in the records abstract forms. There is still no IEP for some children.

Evaluation has been completed, so it is either determined for or has met eligibility. Some of these children become ineligible at the end of kindergarten. Many of the speech children move out. The data is there; we just have not had the chance to mine it.

Comment/Question: Different kinds of disabilities are identifiable at different ages of the children. Do you have some way of estimating which of those probably underrepresent and overrepresent the true population?

Hausken: Right now, since we have only collected the kindergarten data, I cannot tell you, but the beauty of a longitudinal study is that we will be able to answer that type of a question. Once we get the 1st grade data, it will start showing what these changes are from kindergarten. How many more children are being identified or when do the numbers shoot up? The 3rd grade collection may provide another opportunity to look at how many children are coming into special education who are not special-education children in kindergarten. This is one of the benefits of a longitudinal study.

Cohen: Kristin Denton and Amy Rathbun will now give a joint presentation on some of the early findings on the children and the teachers.

Kristin Denton: The information we will discuss is a brief snapshot of the scope of information that we have. We recently released in February, 2000, a report entitled, "America's Kindergartners" which gives a more comprehensive view of the fall kindergarten data.

Children were assessed in a variety of ways. We captured direct assessment information on them as well as indirect assessment information. In the direct assessment, we assessed multiple cognitive domains: reading, mathematics, and general knowledge. We employed a two-stage approach. We are offering information on children's cognitive knowledge skills in a variety of ways. When these data are released in August or September, 2000, we are going to offer the direct assessment data in different kinds of formats. We will have scale scores that will give information about children's overall knowledge and skills in the cognitive domains. They are separate for reading, mathematics, and general knowledge.

We are also offering these data in a standardized score format with the typical mean of 50 and a standard deviation of 10. It is nice to offer both these formats because if one looks at the children cross-sectionally, one may use the t-score to study possible differences by subpopulation, but if gain or growth over time is being studied, we offer a scale score format.

One of the more interesting presentations of the information is in the proficiency levels. This is something that people will be interested in because it is meaningful. Instead of just referring to children's reading knowledge and skills, we are referring to more specific components of these areas. These proficiency levels are developed in the reading and mathematics domains. The general knowledge domain is unique in that in the kindergarten and 1st grade battery, it is a compilation of both social studies and science knowledge. As we are developing the out-year instrumentation, we find that it will be more of a science-oriented component.

The reading proficiency level scores provide information about children's letter recognition, their understanding of the letter-sound relationship at both the beginning and the end of words, their ability to recognize common words by sight, and their understanding of words in context.

In the mathematics domain, there is information about children's ability to recognize basic numbers and shapes. The mathematics domain reflects the most sophisticated mathematics skills or knowledge represented in a set. It is a compilation of mathematics skills and knowledge. For example, not only are they counting to 20 and recognizing two-digit numbers, but also they are understanding the relative size relationship. For ordinality and sequence, it is a compilation of constructs culminating in the notion of ordinality of sequence. Addition, subtraction, multiplication, and division are straightforward, though we do not present just simple numerical statements to the children. With all of the mathematical assessments, we represent them in a pictorial way in order to be as developmentally appropriate as possible.

In the fall and spring of kindergarten, we see relatively high correlations between the domains. This is not surprising. There is much theory and research that suggests that domain specificity increases with age; thus, we were not at all surprised to find that, for example, reading and mathematics are correlated at about 0.7. In the fall of kindergarten we found that 66% of children recognize their letters, 29% understand the letter-sound relationship at the beginning of words, and 17% understand the letter-sound relationship at the end of words. Additionally, some of the children recognize words by sight and understand words in context.

Do not be alarmed by the low percentages because this is a longitudinal study. This is a battery that assesses kindergartners and first graders. As we are receiving the first grade data, we are seeing that the scores for sight words and words in context are increasing dramatically. The children are gaining these skills across the K-1 year.

In terms of mathematics skills and knowledge, we find that the overwhelming majority of children entering kindergarten remember their numbers and shapes. Fifty-eight percent understand all the constructs represented by relative size, and 20% understand ordinal sequence. Four percent can perform basic addition and subtraction, and less than 1% can multiply and divide. Since this is a longitudinal battery, the multiplication and division scores will increase over time.

One of the most fascinating things that we see is the difference in skills in kindergarten because of the variation of ages. Because children are developing so rapidly, we see a natural variation of age between the 4-year-old children who are performing a bit differently than the 6-year-olds, with the older children tending to score slightly higher. This finding is not surprising. These children are not dramatically different in that the differences are not greater than two standard deviations on these subjects. This is the natural variation that kindergarten teachers encounter.

There are some racial and ethnic differences, which are probably confounded by other issues such as socioeconomic status. We see that the Asian and White children tend to be doing slightly better than their African American and Latino counterparts. In terms of family type, whether there are two parents or a single mother, children in two-parent families are doing slightly better than children in single-mother families. There is also a difference relating to mother's level of education. We see that children whose mothers have higher levels of education tend to be doing a little better. The same pattern is observed in utilization of welfare services, either AFDC, TANF, or whatever name is given in the state.

We also developed a risk factor index that consisted of a mother's education less than high school, the primary language being non-English, a single parent household, and the utilization of welfare services. We see that children who have fewer risks present in the family are doing better than their counterparts. We did a calculation based on household income and family size, and we see that children above the poverty threshold are doing a little better than children below.

There is a difference in reading scores by school type. Once again, children in private schools are doing better than children in public schools.

The two common themes I would like to convey with these findings are that, up until now, the best national data we have on children of a young age perhaps can be derived from the National Assessment of Educational Progress which has data on 4th graders. We know that differences by many salient family and child characteristics exist in 4th grade: (a) family type differences, (b) income differences, and (c) mother's education differences.

These data indicate that these differences exist as children enter school for the first time. One of the powers of this study is that, since it is longitudinal, we will be able to track and monitor how these differences operate over time. Are these gaps increasing, lessening, or remaining the same? In other words, how are schools serving our children?

Even before schools have had a chance to have an effect, we see school-type differences, so whenever we see school-type differences, we need to put them in context. Once again, since we do have a longitudinal study, we will be able to track these differences over time and see if private schools are doing a different job with our children than public schools.

Amy Rathbun: My focus will be on findings from the fall kindergarten teacher survey and the teaching and evaluation practices that America's kindergarten teachers are using in their classrooms. We looked at the teacher's years of kindergarten-teaching experience, their highest education level, and the areas in which they are certified in either elementary or early childhood education. We also examined school-type differences if any, and the percent of free- and reduced-lunch-eligible students in the school.

The early childhood community and national education standards panels recommended the types of educational experiences that are developmentally appropriate for young children. These include using a variety of grouping strategies, including individualized instruction, small group activities, and limited amounts of whole class instruction. They also recommend a balance of child-initiated and adult-led or adult-directed activities. In addition, they recommend that teachers provide children with opportunities for meaningful, hands-on experiences. These are through the use of learning centers with interesting objects that children can easily access and use either on their own or in small groups.

A fourth recommendation is that teachers assess children on a wide range of behaviors and competencies. Rather than just focusing on test scores, they recommend that teachers evaluate all domains of development including social, emotional, and physical growth in addition to cognitive growth and attainment.

In the fall we had over 3,000 teachers complete the survey for us. All of the kindergarten teachers in the sampled schools were asked to participate in the study even if they did not have sampled children in their classrooms, ensuring a representative sample of kindergarten teachers for analysis. We asked these teachers to complete a self-administered paper-and-pencil instrument in both fall and spring.

Based on the recommendations of the early childhood community, we looked at four research questions based on data collected from these teachers. First we were interested in how much time teachers spend in teacher-directed and child-selected activities. In conjunction with that, we were interested in the proportion of time teachers spend in various grouping arrangements for their instruction. Here we looked at whole-class, small-group, and individualized instruction. We also were interested in how kindergarten teachers provide an environment that is conducive to learning and exploration. We collected information on teachers' use of activity centers and examined how many interest centers are used on average and how many are used on average in different content areas. Finally, we were interested in looking at the evaluation criteria that teachers perceive are most important for assessing their kindergartners. The criteria that we looked at were not only based on comparisons to their peers and outside standards, but also on aspects such as improvement and effort.

The findings of the first research question—how much time teachers spend in teacher-directed and child-selected activities—indicated that teachers working in part-day classrooms and full-day classrooms tended to spend about the same proportion of time in the different grouping activities. There were not differences by AM, PM, or full-day classes. The majority of the time was spent in teacher-directed, whole-group instruction, which represented about 40% of the time. A total of 60% of the time was spent in the two areas of individualized instruction and small-group instruction.

We found that public kindergarten teachers spent the largest proportion of time on teacher-directed whole group instruction, which represented about half of their instructional time. We also found that public kindergarten teachers tended to spend a greater proportion of time in teacher-directed, small-group instruction than did the teachers working in private schools. For the most part, kindergarten teachers who had varying levels of education, years of kindergarten-teaching experience, and various teaching certificates did not tend to differ by the proportion of time they spent in different grouping arrangements.

Looking at results in terms of percent of free- and reduced-lunch-eligible students in the schools, we found some differences in part-day classrooms. We broke out the percent of free- and reduced-lunch-eligible students into three categories: one comprised of a relatively high percent (50% or more) of students being eligible for free and reduced lunch, a middle group of 20% to 49% of students eligible, and a relatively low group of less than 20% eligibility. We found that in schools with a high percent of free- and reduced-lunch-eligible students, these teachers tended to spend more time on small-group instruction and less time in child-centered activities than did the teachers with the lower percent of students eligible for free and reduced lunch in their school. Now, the percent of free and reduced lunch is not tied directly to the classroom because we do not have that information. However, an overall school level is at least one indicator we can analyze.

We did not see differences in terms of whole-group instruction or teacher-directed instruction for this. Again, we only found this for part-day classrooms.

On the question of how teachers are providing an environment conducive to learning and exploration, we looked at the percent of teachers who use different interest areas in their classrooms. We found that teachers on average use about nine of the interest areas listed on the survey. The most common were the reading areas with books, the puzzle and block areas, and the math manipulative areas. The ones that were least reported were the science areas such as science and nature centers with manipulatives, and the water and sand table.

Next we tried to group these areas or centers into content areas to see if there were differences in the way teachers used these by teacher characteristics and school characteristics. We grouped the bottom four, the pocket chart panel board in the reading area being a literacy area, to find the total number of literacy areas a teacher had in their classroom. We grouped math areas and puzzle block areas into a math area, and we grouped the two sciences together. We kept the computer area by itself. We then grouped the top two, the art and the dramatic play areas, into an art area. After grouping them into the five different content areas, we compared them by the different characteristics. We did find differences in terms of teacher characteristics like education level and areas of certification.

We also found school-type differences. We were pleased to find that only 2% of the teachers reported having less than a bachelor's degree. Of that group, about 84% of them worked in non-Catholic private kindergarten classrooms. Less than half of them reported having either an early childhood or an elementary certificate.

Keeping that in mind, we found that kindergarten teachers who held neither the elementary nor the early childhood certificate reported using all of the interest centers less often than other teachers. Another interesting finding was that teachers who had an early childhood certificate reported using the science centers more often than the other teachers, including teachers with both certificates and those with just the early childhood certificate.

We also found differences by highest education level. We found that teachers who had less than a Bachelor's degree reported having significantly fewer literacy, math, and computer centers in their classrooms, while teachers who had a Master's or higher education level reported having more computer centers in their classroom.

We did not find differences by the years of kindergarten teaching experience or by the percent of free- and reduced-lunch-eligible students in the school; however, in terms of school-type differences, we found that public kindergarten teachers reported having more activity centers in each of these content areas than other teachers, with the exception of the science areas.

Finally, looking at the criteria teachers thought were important to use in evaluating their students, we found that kindergarten teachers favor ratings that compare a child's current progress with their past performance or progress. Kindergarten teachers also favored things such as effort and class participation over comparisons between a child's achievement and their peers and outside standards.

We did find some differences, however, when we looked at school characteristics. For instance, over half of the public kindergarten teachers felt that a child's achievement relative to outside standards was very or extremely important, compared to only about one third of the private school teachers most likely due to accountability. We also found that the public kindergarten teachers were more likely to rate class participation as very or extremely important in comparison to the private kindergarten teachers. The other differences we found were by the free- and reduced-lunch percent eligible students, where we found that teachers working in schools with relatively high percents of free- and reduced-lunch-eligible students were more likely to feel that certain criteria such as daily attendance, achievement relative to classmates, and achievement relative to outside standards were very or extremely important. However, this tends to be linked somewhat to school type in that we find that the schools with higher percents of free- and reduced-lunch-eligible students tend to be the public schools.

We did not find any significant differences when we looked at the three teaching characteristics of kindergarten-teaching experience, highest education level, and certification areas.

In summary, we found that teachers use a variety of instructional grouping activities and that they are moving toward developmentally appropriate practices. We found the proportion of time that they spend in the more individualized grouping arrangements is greater than the amount of time spent in whole-class instruction. However, whole-class instruction remains the most dominant practice.

We also found that the proportion of time in various grouping arrangements does differ by school type and the percent of students who receive free or reduced lunch in the school. We found that most kindergarten teachers report using a variety of interest or activity centers in their classrooms. However, there were differences by school type, level of teacher education, and area of certification.

Finally, we found that the importance of evaluation criteria also differ by school characteristics such as school type and percent of free- and reduced-lunch-eligible students. We found that evaluation criteria favored a focus on behavioral aspects such as effort and social and personal behaviors, and these results suggest the importance that teachers place on the socializing role of kindergarten.

Question: Did you look at teacher education by school type?

Rathbun: We looked at all the teacher characteristics by school type and by percent of minority students in the classroom.

Jeffrey Seltzer, National Association for School Psychologists: How does class size factor into what teachers might do or not?

Rathbun: We did do some analysis of data collected at the teacher and classroom levels which combine the class size across the two classes and use an average class size. These data are further examined in a report we are releasing soon.

Question: Regarding the datasets that you will release in August, 2000, you matched teacher to student on a variable, so we can look at that relationship?

Denton: Each child's file will have an identification code, and you can link to the teacher and to the school.

Rathbun: The child's record will have child information, information on that child's teacher, and also information on that child's school, so you will have a complete record for that child specific to the actual class. Even if they teach AM and PM and that child is in AM, you will get the AM information from that kindergarten teacher. We have separate teacher files if you just want to do an analysis at the teacher level and separate school files.

Cohen: Our last presenter will be Nick Zill who will talk about the Head Start verification process.

Nick Zill: Verifying the children whose parents reported that they attended Head Start is important because the Administration for Children and Families is naturally interested in the children who went to Head Start and the ability to analyze how those children progressed through kindergarten and the later grades. It is necessary to verify the children's participation because, in previous studies, there has been some evidence that parents tend to overreport Head Start participation. They may say that their child attended Head Start since Head Start has positive associations; however, there are many other kinds of private child care and early education facilities whose names sound Head Start-like.

In some of the surveys like the National Household Education Survey, sponsored by the National Center for Education Statistics, the number of parents who reported that their children attended Head Start seemed much larger than the enrollment data. In sharpening up the questions in subsequent rounds, however, these findings were less evident. Nevertheless, there was this concern of over-reporting.

When you are doing analyses with the dataset, it is important to have some sense of assurance that the children you think went to Head Start, actually did go to Head Start. At a minimum, you want to have a subsample that you feel quite confident did go to Head Start so that you can exclude erroneous classification of children who, in fact, attended some other kind of a program or no program at all.

In order to verify Head Start attendance, the parents were asked whether the child had attended Head Start. We differentiated between "ever" and "in the previous year." The parent was asked for the name and location of the center that they attended. Typically in survey research, many errors are created when one has to start entering names and addresses. People misspell the names of centers or perhaps they do not recall the name. To prevent this, we created a database of all the Head Start centers in all of the sampling areas that we sampled around the United States on a computer used by the interviewer onsite. The interviewers checked the name of the center against the database. If the center was not in that database, they entered the name and address as accurately as possible.

We also checked to see whether there was a school record of the children having attended Head Start. This was done even if we had a parent report independently. If information about the center was obtained, we then sent a verification questionnaire to the center and prompted them to respond. The center directors were asked to report whether indeed the center was a Head Start center, or some other kind of center, and whether they had any record of the child having attended.

The sample of ECLS-K was in 41 states and the District of Columbia, so it was a nationally representative sample. We had to create a list of the Head Start centers, and we used this Head Start list in the fall kindergarten to create the location database.

We identified 670 Head Start programs in the 41 states that could be potentially eligible. Helen Taylor, the Associate Commissioner of Head Start, sent a letter urging them to cooperate, and 95% of the Head Start programs responded. We identified 5,472 Head Start centers for which we had names, addresses, and assigned identification numbers. From this information, we created this computer database.

We then compared these data to the database, and we had 725 Head Start centers that had identification numbers and could be fielded. Another 1,064 centers did not appear to be in our database. Of these, 279 were duplicate entries, leaving 785 unduplicated. We searched more diligently, and we found that 882 of these centers were in fact in the Head Start directory, and we identified that 134 of them were Head Start centers when we telephoned.

Interestingly, for 459 we had insufficient information to field, to send to any kind of center. Eighty were not Head Start centers so we did not have that information; thus, we sent out verifying questionnaires to 941 Head Start centers.

We telephoned and urged the centers to respond. Sometimes we found it was difficult to reach a person in authority to respond to the questionnaires. Sixteen percent of the centers required a second package. Out of the 941 Head Start centers, 116 turned out not to be Head Start centers, 825 were, and 96% of these Head Start centers cooperated, which is quite a high rate. Only 4% were non-respondents, but for the majority of those centers, we could not locate a good address. Only a tiny fraction refused to cooperate, raising some issues of confidentiality.

We identified 3,254 children out of the sample who reported to "ever" be in Head Start. Of these, 2,905 were in Head Start in the last year according to the parents. There was an independent subset of 495 children who were identified through the schools as having attended Head Start. Either the parent did not report this, or we did not have a parent interview for these children. This totaled 3,725 children. Therefore, this subset amounted to almost 20% of the weighted estimate of the total sample.

We had locating information for 2,724 or about three fourths of the children, but for another 1000, we were unable to follow up because we did not have sufficient locating information. Of those that we could follow, we received a response from about 2,628, approximately 97%. We found of those that 91% were a Head Start center, and only about 9% were not a Head Start center. From the Head Start centers, about 82% had a record that the child attended. It is fair to say that this does not mean the child did not attend; it means that there was no record of the child attending. However, in the vast majority, we did validate that they had attended.

The best estimate that we were able to come up with from the Head Start Program Information Report (PIR) was that we should have around 765,790 children. Our population projection of the number of children identified either by parents or by the school records was 759,890, which is 99% of the PIR enrollment. Indeed, despite the fact that there was some erroneous identification, the overall population estimate was quite good. We were able to verify approximately 416,000 children, or about 54% of the total PIR enrollment.

We then looked at a smaller subsample, comparing the projected size of the group with confirmed Head Start participation to enrollment figures. We also compared the geographic distribution and the demographic characteristics of the verified and nonverified children in terms of Head Start participants within ECLS-K. We compared the verified participants with Head Start Family and Child Experiences Survey (FACES), which is a separate sample of known children who are attending Head Start.

The study compared the verified attendance and nonverified attendance groups according to the current poverty status, having ever received welfare, parent education level, and race/ethnicity. These two groups are quite close to one another. The verified are slightly more likely to be in poverty and slightly more likely to have ever received welfare. However, in terms of the parent education levels, they are very close. If one does a 1 to 9 scale of most educated parent, the mean of the verified was 3.5 versus 3.6 for the nonverified. Race/ethnicity was also similar. One sees the distribution of roughly equal numbers of White, African American, and Latino. About 25% of the students were Latino. In the smaller groups, there is a bit more discrepancy, but still quite close, so that the profile is very similar to the FACES.

The most striking thing about the geographic distribution is that the nonverified cases are a bit more likely to be from the central cities and suburbs, while the verified cases are somewhat more likely to be from non-metropolitan rural areas. That makes sense because there are probably more alternative programs in the metropolitan areas that parents could confuse with Head Start when actually it was some other kind of a program.

In comparison with the FACES, which studied a sample of children in Head Start in 1997, the ECLS-K is quite similar. There is a difference in terms of current poverty status. Seventy percent of the Head Start children were in poverty compared to 53% in FACES. However, there is a year difference. This group is generally moving up in income. More of the mothers are employed. We are also in beneficial economic times, so the poverty rate is decreasing over time. Remember that we saw that 79% of the verified Head Start group had been on welfare at some point, so that suggests that it is comparable to the Head Start FACES sample.

The parent educational level is quite similar in the two studies, particularly at the ends. Four percent had a grade-school-only education and 13% had some high school versus 14% in the FACES. Six percent of parents in the ECLS-K had Bachelor's degrees versus five percent in FACES. There is more discrepancy in the high school diploma, GED, and some college, but this may have been partly due to differences in the questionnaires and the way these questions were asked rather than differences in the sample. The race/ethnicity is very similar between the verified ECLS-K and the Head Start FACES. In terms of regional distribution, the two are also quite similar. There is a tendency for the verified to be from the South more than in the Head Start FACES, but basically there is a very congruent kind of picture.

We conclude from these findings that the projected number of kindergarten children who had participated in Head Start based on the combination of parental reporting and school records is very close to the enrollment total as reported in the Head Start Program Information Report. The verification process produced a Head Start subsample of only 54% of the national enrollment figure, but whose demographic profile closely resembled that of known Head Start students.

The verification process was imperfect due to some parents' and schools' inability to provide locating information on centers, and some centers' lack of thorough attendance records. Families with unconfirmed reports of Head Start participants had demographic characteristics quite similar to those whose families reported participation when it was confirmed, and the unconfirmed reports were slightly more likely to be from the central cities and suburbs.

We now have a group of students within this data with confirmed participation in Head Start. One can analyze those with a high level of certainty that they went to Head Start and see how their school readiness and progress compare in school. One can also look at the entire sample as being reported by parents and schools to have attended Head Start as well. These data will be made available in August, 2000, and ACYF and NCES will also be looking at the characteristics of the Head Start children and how they compare and perform later on. Many of you may find it interesting to look at these data and to examine relationships, for example, of special education or language-minority issues to a number of policy-relevant issues.

What is not known is the quality of the Head Start programs that these children attended. One of the things this verification process illustrates is the importance of the birth cohort study, because it is a prospective study where we will, in fact, follow children through Head Start or other forms of child care, and will know something about the characteristics of those programs as well as later performance. The combination of the two databases should be very useful in telling us a lot about the consequences and sequelae of Head Start participation.

Theresa Hawley, Ounce of Prevention Fund: Was the instrumentation mostly pulled from commercially available instruments, or were these instruments that you completely developed yourself?

Hausken: We have questionnaires that were developed from a variety of existing questionnaires that we combined. The assessments are not available due to copyright and security issues. The Department has agreements with the publishers regarding this new instrument that cannot be used outside government studies.

Question: Could you address some of the overlap with the FACES?

Zill: Many of the items in the battery were from existing copyrighted instruments. They were carefully field-tested and pretested and subjected to IRT analysis to test item difficulty level. This adaptive procedure or characteristic enables one to get a good estimate of where the child is with a relatively short test by having this initial screening test and then three difficulty levels of follow-up tests.

Hausken: However, the instrument was designed for this study, a longitudinal study. It will not give you the depth that you may be looking for.

Zill: In the Head Start FACES and the kindergarten follow up to that study, through special permission of NCES we were able to make use of parallel reading and general knowledge assessments. Therefore, in the database, we will have scores for Head Start children where we know something about the program quality that are comparable.

Comment/Question: This would be a great instrument for us to use in looking at children in the Head Start program from the beginning to the end of Head Start to see where they are. What you are saying is that it is not available?

Zill: Bear in mind that these are kindergarten students.

Hausken: The items on the survey go quite low, but bear in mind that it is a survey instrument. It is not a diagnostic or program instrument which is what most of Head Start has used.

Zill: You can also learn from the report, in looking at these proficiency levels, that there is some good analysis to show that if a student attained the higher levels, there is a very good probability that the student also achieved the lower levels, so they are hierarchical. Those same kinds of skills can be assessed with other available instruments that can give you some guidance in terms of advising Head Start programs, without being able just to use the instrument as such.

Hausken: The *Condition of Education 2000*, coauthored by Zill, is an essay with an introduction by Jerry West, and gives a nice presentation of the data and a nice description of the assessments and methodologies as well.

Denton: *The Condition of Education* is on the NCES.ed.gov website. It is a recent publication, which has gathered a lot of press. Search for it under early childhood or kindergarten.

Norman Watt, University of Denver: Do you have measures of the credential levels of the schools in which these children are being served, and do you have evidence of credential levels of the preschools that feed to the kindergarten? Did you verify the level of education and training of the personnel that are teaching the students in the survey?

Hausken: Yes, we do for the individual teachers as well as at the administrative level. However, the preschool program variable will not be available in the public dataset. Only the kindergarten variable will be included. We only started collecting the data at K.

Denton: When we were able to collect it, we also have that information for the instructional aides that are in that child's classroom as well. We also have information on the characteristics of the teachers' and aides' English ability.

Question: Do you have any information about any level of credentials of the preschool teachers that failed to report their credentials?

Hausken: No, we do not.

Zill: There is some information on whether they attended prekindergarten programs, which tend to be in public schools. The education level of teachers in public school prekindergarten programs tends to be comparable to what Rathbun reported about kindergarten. In other words, most of them have Bachelor's degrees, whereas in Head Start and some other kinds of programs, the proportion of teachers who have a Bachelor's degree is lower.

Hausken: You would have to infer from the current and existing data.

Question: Would that be part of your analysis? Would you be doing retrospective analysis of the credentials of the preschools that have students in the survey?

Hausken: No, that would not be possible to indicate, but in the birth cohort, it would be very possible because the birth cohort will be collecting that type of information.

Jeffrey Roth, University of Florida: You said that in the verified sample Head Start represents 20% of the children. When you presented that to the Head Start office, were they surprised since you said later that that represents only half of the anticipated percentage?

Zill: No, I said that half have been verified. They are the ones that we were able to verify for certain that they actually did attend this Head Start center, and the center has records on it. That does represent a somewhat surprisingly high proportion. However, you have to remember that this includes children who might have been in Head Start for only a part of the time rather than attending in a given year for the entire year. Poverty rates are high in the young child population, so we would expect a substantial proportion to have attended. I did find this surprising in terms of the overall sample.

Comment/Question: I interpreted what you said as 80% of the 20% was verified, and the 20% figure was either parent-reported or school-reported. It is not the full 20% that you had verified that gave you that statistic?

Zill: No, in fact, it is more like 10% to 12% that we had verified.

Comment/Question: You looked at a variety of risk factors and race/ethnicity. Did you look at a variety of risk factors controlling for race/ethnicity?

Denton: In the publication we released, we did break down race and ethnicity. At that time, the best available information we had was mother's education, so we broke it down by low mother education and race/ethnicity, and then higher mother education and race/ethnicity. One can do those types of analyses. I encourage people to do those types of analysis because there may be something occurring besides racial and ethnic differences.

Question: How do you access the database?

Denton: It is available for free as a CD-ROM as well as from the Web. It is compatible with SPSS, SAS, and STATA.

Hausken: We call it an electronic codebook. You can select variables and it has help screens, with variable names. You can create your own files using the data.

Denton: Over the next few years, beginning August 2000, the Department of Education is offering a series of trainings.

Consequences of Welfare Reform

The Effects of Welfare and Employment Policies on the Development of Children in Low-Income Families

CHAIR: J. Lawrence Aber
DISCUSSANT: Martha Moorehouse
PRESENTERS: J. Lawrence Aber, Pamela A. Morris, Christine Ross, Lisa Gennetian, Robert C. Granger

The impact of welfare and employment policies on children's development was presented in order to advance our understanding in this area of recent concern. Evaluation research of child outcomes of three state welfare programs was presented as well as syntheses of data on the impact on child outcomes of these and other recent welfare and employment policies.

- **The Florida Transition Program: Effects of a Time-Limited Welfare Program on Children**
  Pamela A. Morris

- **The Iowa Family Investment Program: Effects of a Work-Focused Welfare Program on Children**
  Christine Ross, M. Robin Dion

- **The Minnesota Family Investment Program: Effects of a "Make Work Play" Program on Children**
  Lisa Gennetian

- **Synthesizing the Effects of Multiple Welfare and Employment Policies on Children**
  Robert C. Granger, Lisa Gennetian, Pamela A. Morris, Christine Ross, Anne Sweeney

(Summaries not available at time of publication)

Exploring Unintended Consequences of Welfare Reform and Early Childhood Intervention

CHAIR: Hirokazu Yoshikawa
DISCUSSANT: Edward Zigler
PRESENTERS: Stephanie M. Jones, Hirokazu Yoshikawa, JoAnn Hsueh, Elisa A. Rosman

Several decades of research have broadened our understanding of the impact of policies aimed at low-income families. However, many unanswered questions remain, particularly those concerning the unintended effects of programs, and those focusing on the effects on children of programs intended for adults. For example, many of the early welfare-to-work programs aimed at young mothers had limited effects on mothers' behavior, and some appeared to have negative effects on children. Furthermore, when programs did show an impact on young mothers, in some cases it was negative (e.g., increased depression). To date we know very little about why these effects occurred. With 1/3 of all children in poverty, and many families participating in both Head Start and self-sufficiency activities, understanding both positive and negative consequences of such programs, as well as outcomes for both children and adults, becomes critical. In applying diverse approaches to questions of unintended consequences, the papers on this panel serve to inform both future research and the design and implementation of interventions aimed at families in poverty.

In the first paper, data from a longitudinal study of the impact of parent involvement in Head Start on young children and their families was used to explore the impact of maternal involvement in both Head Start and in self-sufficiency activities on both maternal well-being, parenting, and child outcomes. The second paper utilized longitudinal data from the 16-site New Chance Demonstration (a national program developed by Manpower Demonstration Research Corporation) to reconsider the lack of strong positive effects of this human capital-focused welfare reform program on parents and children. Finally, the third study considered the lack of positive findings of New Chance in light of potential interactive effects of the intervention with both maternal depression and family ecologies, specifically, father coresidence and support, and grandmother coresidence and support.

■ Parent Involvement in Head Start: Context and Consequences

Stephanie M. Jones, Faith Lamb-Parker, Amanda E. Schweder, Carol Ripple

Parental involvement is a central feature of Head Start and has long been understood as a key component of program planning, management, and implementation. Head Start also provides opportunities for parent education, volunteering, and skill development, and supports parents' efforts toward economic self-sufficiency. And this makes sense: parental involvement in children's early education has been linked to positive outcomes for children and parents, such as greater cognitive performance, increased school readiness skills, and a warmer parent-child relationship (Lamb-Parker, Boak, Griffin, Ripple, & Peay, 1999).

However, despite the clear benefits of parent involvement for both children and families and for program practice, Head Start increasingly faces the challenge of supporting both parent involvement and parents' efforts to move toward self-sufficiency as they transition from welfare to work. During the period of this study, as the zeitgeist surrounding welfare and family support was beginning to transition to "welfare-to-work," mothers with young children in the welfare system faced increasing pressure to become involved in self-sufficiency activities such as education, job training, and employment. Parents who were both very involved in Head Start and highly engaged in self-sufficiency activities may have been at greater risk for poor psychological outcomes, in turn placing their children at risk for a variety of poor outcomes. Earlier analyses with this data support this contention. Specifically, mothers who were both engaged in self-sufficiency activities during the Head Start year and had a high degree of parent involvement reported higher levels of depression at the end of the Head Start year than nonengaged mothers and those who were engaged but had medium or low levels of involvement (Lamb-Parker, Piotrkowski, Kessler-Sklar, Peay, & Clark, 1998).

This study further explored these issues, enabling a deeper understanding of both the contexts of parental involvement in Head Start and the impact of such contexts on the benefits of Head Start for parents and children. The following objectives were addressed:

1. To explore the extent to which parents are both involved in Head Start and/or engaged in self-sufficiency activities.
2. To examine the unique impact of parent involvement and engagement in self-sufficiency activities on maternal well-being, parenting behavior, and child outcomes.
3. To examine the combined impact of parent involvement and engagement in self-sufficiency activities on maternal and child outcomes.

The sample for this study was drawn from a larger longitudinal study of parent involvement in Head Start, the goals of which were to further explore the effects of parent involvement in Head Start, and the mechanisms by which it has its effects. Measures of maternal well-being (depression, mastery/self-efficacy), parenting (warmth, encouragement of independence, aggravation, and strictness), and child cognitive and social competence were administered at both the beginning and end of the Head Start year. All scales have adequate reliability and internal consistency (Lamb-Parker et al., 1997).

Results indicated that parents spent an average of 106 hours participating in policy meetings, attending workshops, or volunteering at the center. For those mothers who did any self-sufficiency activities, the average number of weeks per year was just under 10 (2.5 months) with a range from 1 to 24 weeks. Furthermore, the highest levels of both engagement in self-sufficiency activities and parent involvement in Head Start were related to both a significant increase in levels of maternal depression and no positive change in maternal feelings of mastery/self-efficacy.

Interestingly, these effects did not necessarily translate into poor parenting or compromised cognitive and behavioral outcomes for children. In fact, it appears that for these outcomes, high parent involvement may confer an advantage for those who are balancing multiple activities. For example, high levels of parent involvement were related to a significant *decrease* in parental strictness for those who were involved in work activities. In this case it appears that those who are most engaged in self-sufficiency activities are benefiting the most from parent involvement.

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■ Variation in Teenage Mothers' Experiences of Welfare Reform: Selection Processes and Developmental Consequences

Hirokazu Yoshikawa, Elisa A. Rosman, JoAnn Hsueh

Developmental evaluations of the current wave of welfare reform programs present challenges with respect to: a) assessing child outcomes specific to developmental periods; b) accounting for heterogeneity among low-income families in both baseline characteristics and involvement in self-sufficiency activities and supports; and c) development of alternatives to experimental approaches to causal inference. This study (Yoshikawa, Rosman, & Hsueh, 2001) addressed these challenges by examining effects on 4- to 6-year-old children of different patterns of child care, self-sufficiency activities, and other service utilization indicators among experimental-group mothers in a 16-site welfare reform program. Outcomes in areas of cognitive ability and behavior problems were investigated. The study identified 7 subgroups of participants engaging in different patterns of service utilization and activity involvement.

Effects of mothers' participation in specific patterns of services and activities on child cognitive ability were found using a 2-sate simultaneous equation methodology to account for selection. For example, children of mothers characterized by high levels of involvement in center-based child care, education, and job training showed higher levels of cognitive ability than children of mothers in groups characterized by high levels of involvement in two of those services. In addition, children of mothers in groups with high levels of involvement in any of these activities showed higher levels of cognitive ability than those with low levels of involvement. The bulk of selection effects occurred through site-level differences, rather than race/ethnicity, family-level socioeconomic status, social support, or maternal depression indicators.

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■ Welfare Reform and Child Development: Moderating Effects by Maternal Depression, Father Involvement, and Grandmother Involvement

Elisa A. Rosman

Some researchers have begun to examine welfare reform with a specific eye towards its effects on children (see Zaslow, Tout, Smith, & Moore, 1998, for a review). However, researchers typically do not take into account variation within the welfare caseload and, specifically, variation among family ecologies (Zaslow et al., 1998). Welfare reform, and its attendant activities and supports, may affect children very differently depending upon various aspects of their family environments. This study examined the constructs of maternal depression, father involvement, and grandmother involvement as moderators of the effects of a welfare reform program on children. The sample included 1,602 children between the ages of 3 and 6½ whose mothers had participated in New Chance, a multi-site welfare-to-work program with an emphasis on human capital development (i.e., education, job training; Becker, 1981). (For more information, see Quint, Bos, & Polit, 1997.) Father and grandmother coresidence were investigated, in addition to perceived support from these family members, in predicting cognitive and behavioral child outcomes. The mediating roles of parenting stress and emotional support in parenting were also explored. Analyses were conducted for the full sample, as well as for the White, Black, and Latina subsamples. Although main effects were found for the intervention and for maternal depression (as had previously been found by Quint et al., 1997), no main effects were found for the family ecology variables. However, interactions suggested complex relationships among New Chance and the family characteristics for both the full sample and for Latina families. Results were discussed in terms of policy implications and possible future research.

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Culture and Context

CONVERSATIONS WITH EDWARD ZIGLER, PROFESSOR SIR MICHAEL RUTTER, AND JOHN HAGEN

How Can We Know Environment Matters

CHAIR: John Hagen

Virginia Rauh: I am from Columbia University in New York City and have a question for Dr. Rutter and possibly Dr. Zigler. You mentioned in an earlier session with respect to the 10-year-old with disruptive behavior about the possibility that the behavior of the adolescents or the children was influencing the likelihood of their experiencing stressful life events. For those of us who are interested in stressors as part of the environment that we measure, do you have insight into the difference between stressful life events, possibly some of which we have control over, and more chronic, social-structural stressors over which we have less control? It is a very provocative hypothesis that the children are eventually controlling or affecting the kinds of stressors in the environment that they encounter. I would agree that that seems like something that happens as a part of life. However, with respect to the chronic stressors over which whole groups of people in this country have very little control, it makes it extremely difficult to assess the child's or, in my case, the mother's impact on her environment and the environmental impact on the mother. Therefore, this is a poorly formulated question about how you would address those stressors that are chronic and over which people have less control or less impact.

Michael Rutter: The key issue is what control people have over chronic environments and, given that chronic environments provide the strongest effect on psychological development, where do we go from there? Let me respond in several different ways. First, it is not a question of control; it is a question of influence on. It is not quite the same thing. For example, we find quite powerful effects of childhood behaviors as predictors of discordant marriages and marital breakup, but I do not think it would be sensible to talk about antisocial girls choosing deviant partners. There may be some aspect of that, but it is more likely that several other things are operating. First, one chooses one's partner from the peer group one is in. If one's peer group consists of people of similar sorts of deviant behavior then it is likely to be that he or she ends up in that group. It is partly, too, what one's currency in the marriage market is. So it may not be that one chose the least satisfactory spouse. It may be that person is with whom one ends up because nobody else would have him or her.

So I would depart from control. I mentioned this morning that shaping and selecting implies a higher degree of activity than is actually the case. The other thing is that in talking about the effects on life events, these are what we measured, but of course, they carried with them a much broader baggage of other things. That part of that broader baggage would be the chronic adversities you are talking about. Also, although this was assessed in terms of continuities in relation to individual behavior, they also carry their environments with them. Therefore that part of the continuities is the effect of one environment on another. There are aspects in which earlier acts will play a part. For example, dropping out of school is an event, but it also cuts one off from various other events, not permanently, necessarily, but one has to do something to get back into education.

That means that the issue of what one has control over, although it is important methodologically in order to disentangle what are truly cause and effects, is actually a bit misleading in terms of the way real life works. Let us move to a societal area, such as housing policy. One does not have control over housing policy, but on the other hand, one's job, one's education, and one's behavior will all make one more or less vulnerable to that housing policy. Even here, where one is dealing with a societal influence, it is one in which individual factors do play a role. Therefore, the question of how one intervenes becomes quite complicated. One has to say the intervention needs to be based not on any notion of what is the basic cause, but rather on the opportunity of a complex causal chain where one can actually make a difference. The concept of a basic cause is one I do not accept, but even if it were true, that would not necessarily be where one would choose to come in.

Now, to move to the other part of the question. Because research into life events has taken independent and dependent life events as separate entities, there has been the implication that if you brought about something by your own behavior, it cannot have caused your behavior. Of course, it cannot have caused your preceding behavior, but the results of studies, either our own or Robert Sampson's interesting reanalysis of the Glueck study, indicates that behaviors you yourself have brought about—incarceration, alcoholism, and so forth—does impinge back on you, so that behaviors you caused yourself can still impinge on you. The example that I like to use because it is one that is immediately obvious is cigarette smoking. You choose to smoke cigarettes. It is entirely your own fault. Including in fault, of course, are your genetic background, cultural heritage and so forth, but nevertheless you choose to do it. However, the effects of cigarette smoking—such as lung cancer, osteoporosis, and cardiovascular disease--have nothing to do with the factors that led you to choose to smoke. Here is something within your control where here we can say this because we know what the risk mechanisms are, and we know they are different.

With the psychosocial arena, we do not usually have that knowledge. However, the fact is that there is no necessary connection between how you came to have the experience and the effect of that experience on you. Let us not make that sort of assumption. What I am saying ultimately is that chronic adversities are more open to intervention than one would be inclined to think.

Edward Zigler: I was so impressed as I usually am with Rutter's talk this morning. It was a masterful synthesis, and it comes at a time when we are having some difficulties on the policy front. He mentioned Harris' book that states that parents do not make much difference; it is siblings. More recently, Brewer writes about the "myth" of the first 3 years of life where he calls into question many of the assumptions we have made based on the brain work that we have been doing over the last few years. Therefore, if parents do not make much difference, why do we do so much parent involvement in, for instance, Head Start? Rescuing the impact of the environment could not come at a better time. We cannot do a heck of a lot about genotypes. We can do a lot about the environment.

What are those special subsystems in the environment that are pressure points for change in growth and development? I have narrowed it down to four subsystems, never forgetting their complexity and that they do not exist in isolation. These subsystems are in interaction all the time. Each subsystem influences the others. If they are all put together then there is a much broader ecological network of the kind of that Urie Bronfenbrenner would be comfortable with.

I have been studying human growth and development for 45 years, and when I look at the variance in the behavior of children in the various studies over a lifetime that I have read or conducted, family effects are very large, with parents being critical.

Those of us who heard luncheon keynote speaker Stephen Suomi heard it all over again. Mother-child relationships are extremely important, and probably for the human species which does not have the same patterns of socialization as do monkeys, father-child relationships are important too, as we have discovered more and more since Michael Lamb's research. However, we must address how much of this is mothers influencing children and how much of it is children influencing mothers and fathers. A breakthrough was discovering the importance of fathers, which is only 25 years old. Up to then we did not pay much attention to fathers at all. Michael Lamb, Kyle Pruitt, Ross Park, and others have helped us to respect fathers. So I consider the family a key subsystem—think of your own lives and what your own families meant to you in determining what you have become.

The second subsystem that is important is health. It is not a part of early intervention. Head Start was the first intervention program interested in impacting the growth trajectory of a child in the area of health. I suggest that you look at the 42 state programs in the United States today with preschool programs that ignore health. Even though the Goals One panel says that every child will show up at school ready to learn, when they ask, what does this require in addition to preschool education, the answer is health. Obviously a child is not going to be school-ready if she is ill.

The third subsystem is education. Rutter's study, *Fifteen Thousand Hours*, was an absolutely breakthrough piece of scholarship in which he demonstrated, by controlling for other variables which could influence his dependent outcome behaviors, that the variation in school quality made a difference.

The fourth subsystem is child care because the demographics of our society and the entire industrialized world has changed so dramatically. We are now living in a time when 55% of mothers with infants under 1 year of age are in the out-of-home workforce. That means that we are today routinely placing children a few weeks of age into out-of-home care somewhere. It could be family day care, it could be infant-toddler centers, it could be kith and kin care, or it could be a nanny. However, someone is raising the children other than the mothers and the fathers. That is a radical change in the growing-up experiences of children. That system or non-system in this country is disgraceful. Thirty-five percent of all children show up at school not ready to learn. According to one of the studies Boyer conducted, the percentage of poor children, according to inner-city superintendents is closer to 50% or 60%. Where are those children for their first 5 years? They are in some kind of child care, and child care for most children is a sad state of affairs. The child care system in America is one of the reasons that we have these very high rates of lack of school readiness.

Today I went from Rutter's keynote address to a presentation on schooling. We all heard Rutter speak about the environment and its importance in the early years. However, how many people know that in the Four State Cost Quality Outcome Study—California, Colorado, Connecticut and North Carolina—40% of the infant and toddler centers provided environments for children in the first 3 years of life that were so poor in quality that the health and safety of the children were being placed at risk? This is in the richest country on the face of the earth.

Those are the four systems that I have paid attention to, and their interactions. The media is also important if I had to add a quick fifth. You can all think of your own favorite system that you have studied that makes a difference. I chose those because they are systems we can impact.

I want to conclude by picking up a part of the question that I thought Rutter did very well in answering, and it has to do with Head Start and early intervention again. One of the things that Rutter mentioned is long-term environments. He dispelled the idea that one experience is going to alter your life, which is just not true. It is long-lasting environments that one has to look at. It takes a long time to impact. There is a certain integrity to behavior and the human organism. It is relevant to those involved in policy making and applied science because we have unfortunately not escaped the nonsense of the 1960s. My old colleague, who is no longer with us, Joe McVickers Hunt convinced the world in his book *Intelligence and Experience* that a very small change in the environment would produce massive changes in the child. Those massive changes would display themselves primarily in cognition or intelligence, not in behavior in general, not in emotional development, and not in motivation. All the things that are so important. It was nonsense in 1960, and we still have not escaped it. However, long causal chains do make a difference. That is why we have to educate America that even if one funds every child in Head Start who is eligible, or even if Gore wins the election and he brings universal preschool education, that will not solve the problems of the poor. One cannot inoculate children in a preschool for what they are going to experience later.

Look at Valerie Lee's wonderful data that shows that Head Start children go on to rot in school. Why should fadeout surprise us? One cannot inoculate children for the rest of their educational lives. We heard much the same thing from Stephen Suomi about this kind of interactionism that is required and about the complexity needed in our thinking.

There is a whole chain of events. One event leads to the next. If you have a good experience, that is more likely to get you to a next good event. People are going to react to you a little better. So for those of us who want to work at the intersect of knowledge and policy, we are going to have to tell people that it is not enough to give children preschool. They are going to go on to a next stage of life and they are going to need a new set of environmental nutrients.

John Hagen: I would like to follow-up with a couple of comments to see if either of our panelists would have a reaction. One of the messages from Rutter's talk as well as from others that we have heard is that the chronic kind of things that children have to live with have more long-term influence than some of the acute experiences. There are at least some situations where that may not be quite true, at least from my own experience in working with children and also in looking at the literature. It seems especially true with children of divorce and children in foster care.

We know from Mavis Heatherington's work and some other work on children of divorce that one of the biggest traumas children experience is how "comings and goings" are handled, that is, when the child is passed from one parent to the other, whether it is for a weekend or whether it involves joint custody. If the parents can work out some way so the comings and goings from one parent to the other are handled smoothly, it makes a huge difference. Otherwise it is something that becomes a chronic stressor.

I have also done research and clinical work for many years with children in foster care. One of the things we have learned from those children that I do not see in the literature, except for one study that we put together with my colleague Rosalind Folman, is the trauma of being removed from the home and what happens until they get put in a foster home. That period of time can be anywhere from a couple hours to a day or more. The children's experiences of that are incredible and they are very traumatic. They are treated insensitively by many different people, including policemen, social workers, court personnel, and others that get involved. Children express that these experiences are overwhelming to them. Even though in the whole course of things it may have only been a few hours or a day or two over the last year of their lives, it becomes a major event.

These are just a couple of rather simple examples of where we have to understand what children are experiencing; whether these kinds of events are viewed by them as something passing or as something that is out of the ordinary and something they worry about a lot in the future.

My own instincts of having worked with parents and having been a parent and grandparent for so many years now myself leads me to believe that, in fact, these are very important factors. These are things that children feel they have no control over, and yet they happen to them and they become important events in their lives.

Audience Question: I am a mental health consultant in child care centers, and have written a book on training child care workers. We have just seen how Rhesus monkeys at the age of only

2 months leave their parents and what happens to them when they do not have their parents. Are there studies on human infants of what happens to them at this early age? There are so many mothers who are forced to go to work and to leave their children in child care centers and mothers who would like to continue with their professions. Are there studies of what actually happens to these very young infants?

Zigler: Yes—the biggest and best-known study or a series of studies that are longitudinal in nature is the NICHD infant child care study. There is a vast literature on the impact of child care on infants and separation of infants. The problem is that it is not a very representative population. While it is a very important and good study, it is not representative enough to answer a lot of the questions that we would like to answer.

I want to respond and give Rutter a chance to respond to John Hagen's concerns. First, regarding the issue of divorce, it is becoming apparent from Wallerstein and Heatherington that it is not so much divorce itself. Fifty percent of all marriages end in divorce. Therefore, this is an important issue. However, my own reading of the literature tells me it is the conflict in divorce more than the divorce per se. If divorcing parents can stay sensitive to their children and remain friends in some way, they do a lot better and their children do a lot better than if divorce is characterized by hostility and conflict.

Second, transition is a phenomenon that is underinvestigated. It is underinvestigated in Head Start research, although we are making some progress with the Transition project. We do very little in our field to study transitions as transitions. What is going on in a child's mind? What are the mechanisms that are mediating problematic behavior that we see at transition points?

Rutter: I would like to add several quick points. The acute events to which you are referring are all in the context of something more long lasting. The way I would put it is that the likely impact of those events is due to the fact that they are feeding into the child's perception of what the long-term experiences mean. So divorce, of course, is an event, but it is not really; it is a process, a process that begins well before the divorce and continues long after.

The other point to make is that—I am going to oversimplify—the impact comes from what people think about their experiences. Jerome Kagan made this point. He says that although there are some experiences in which one is simply the passive recipient, by and large it is not like that to the extent to which there are long-term effects which will be influenced by what it does to one's image of oneself and one's image of one's interactions with other people. The examples given are of that kind. Yes—they are events, but they are events in which they fit in to something that is more long-term, long-term as to what is outside, but also as to what is inside a child's head.

Hagen: Following up on both sets of comments and talking about Kagan's notion of what people think about their experiences, the next step then is how they act on it. I think of Bandura's theory and his application, and I am always a bit surprised that among developmentalists we do not draw that much on Bandura, and yet right now Bandura is either the second or third most cited psychologist in the country, if not the world. I have been to conferences on public health and conferences in business management where Bandura is talked about time and time again. I think back to my graduate school days when he was an assistant professor at Stanford and they were knocking over bobo dolls. The insight then had to do with observational learning that did not need immediate reinforcement. He did a lot of that work with Aletha Houston but then he moved to the notion of self-efficacy, which in one way is very simple, but another way is very powerful. My reading of it fits the kinds of things that we have been talking about today quite nicely. What he is saying is that each of us is in a world where all kinds of things are happening and we have more or less control over these things. However, the important thing is what we make of it. Do we try to do something and do we have the belief that we can do it and then act in some way to gain some control? It seems to me that is following up on what you said Kagan had said, but I do not know whether it is because it is difficult to operationalize and develop mental contexts that we do not seem to draw from that literature.

Rutter: No, we do not, and I agree with you, that we should. Bandura's writings are provocative and again, slightly oversimplifying, what he is saying is forget about self-esteem. It is all very interesting, but what actually matters is not whether one values oneself highly, but whether one thinks one can do something about one's situation. He says that is not quite the same as self-esteem. I think he is right. He is right because it is an aspect of the self-system that is problem-solving oriented. That is why it has caught on in the way that it has. He has spawned a wide range of studies looking at self-efficacy in a broad range of situations and on the whole, the studies are relatively supportive of that notion. One has only to look to see what is happening in Wimbledon now to see that the notion of self-efficacy is actually quite important in predicting who wins and who does not.

Hagen: His position challenges us to think about interventions and why they work or do not work. We all know that a good deal of work on intervention falls short of what we hope it would do. In a recent *American Psychologist* article he wrote about addiction and self-efficacy. He argues that if one looks at people who have been chronic smokers and quit smoking, by far the majority of those who quit simply do so on their own, and their success rate is much higher than people who attend an intervention to stop smoking. Therefore, he is using that to support his argument. However, one could turn that around into some other arguments, including genetics, as to why some people are able to gain that kind of control and others are not. That is, however, an example of why he has been popular in public health, for example. Especially when we think of children or adolescents, we are usually thinking about bringing an intervention to them rather than allowing them to be the main actors in what is going to bring about their change. That may be one of the reasons as well that we do not hear as much about Bandura and his approach.

Zigler: We are all in agreement that Bandura is a major thinker, and of course, his thinking comes out of the early work with Dick Walters. Also, his early work in social learning theory is reminiscent of other bodies of work. One thinks immediately of "Locus of Control." You are also right that one encounters his newest work more among management and business types than among child psychologists. It is all going to turn out to be important. It was Kurt Lewin who told us that the perception of experiences is much more important than the experiences themselves. So there is a long tradition of that. Obviously it is your perception of what is happening, not what is actually happening that determines how it impacts you. Everything turns out to be related to other bodies of work. If you look at Susan Harter's work and others who look at intrinsic reinforcement, you find that self-image does make a difference independent of your feeling of effectiveness.

Judith Rosen: Dr. Zigler, you were talking about subsystems. Did you intentionally leave out cultural context?

Zigler: You are getting close to Bronfenbrenner's model. The fact of the matter is that culture makes a big difference. There is so much evidence for it. However, in those first 5 or 6 years of life, everything is mediated by the family. No child encounters a culture except through the agents in his life that present that influence to him. Therefore, I am not leaving it out so much as saying that it is a kind of a given in any true ecological model; neighborhoods are a lot closer to any human being than some abstraction called a culture.

It has only been 10 years that we started getting workers like Sampson and Aber and a group of others who are saying that that little neighborhood where you grew up makes a big difference. So we are back into the complexity issue and what Rutter said about complex chains of events. Having had one event will put you closer to having some other kind of event, whether you bring it on yourself as he mentioned earlier, or whether that is just the way your life is going. If a child shows up at school unready to learn, then he is placed in a lower reading group. We have independent evidence that says if a child is in a lower reading group, he gets worse instruction. First, he is only with other low readers so he does not get the benefit of the kind of peer interaction others do. Then we have independent evidence that he also gets poor teaching. That is a concrete example of what Rutter was talking about.

Audience Question: Earlier this morning you were talking about principals being the CEOs of schools. Who becomes the CEO, so to speak, in the Head Start system in terms of delivering education to the children?

Zigler: Who are the CEOs in Head Start? I think they are the directors. That CEO notion is a very important one. There is a wonderful book by Ronald Edmonds, an educator who looked at successful schools and unsuccessful schools. What characterized successful schools was a terrifically good principal. The director in Head Start is the principal. So that is the analogy that I would draw.

Hagen: To me it raises some of the issues of what we know from research and how we then go from that to policy and practice. Valerie Lee is a sociologist who has studied educational systems and educational outcomes using very large samples, mainly doing data analyses from secondary data sets. One of her conclusions to which others also came, such as the Carnegie Commission on Adolescents did, is that very large schools are not good for children. They are especially not good for children in the middle school, but children in smaller high schools also are better off.

Yet I live in a city, Ann Arbor, Michigan, that is progressive, educationally oriented. We have two high schools that are overcrowded. They have been debating about whether they should build a couple of new ones. They decided to build one more very large one for 2,500 children. This is to me running counter to everything we know, and yet the pragmatics of it are it is going to end up being more efficient and more cost-effective to have a third high school of 2,500 rather than build three new ones of 700 or 800 each.

Zigler: People do not understand what a cost-benefit analysis is. We should do more of them and we should learn how to do them because I do not think that any real cost-benefit analysis will show that. We have data that goes all the way down to young children: What is the size of the group? Does somebody know you? Know your name? Do you feel that you are part of something? These are things that are simply determined by the size of the setting. You can be overwhelmed. That is why even youth seek out smaller colleges, such as Wesleyan, rather than the University of Michigan or the University of Texas with 50,000 students. Some feel that by college they should be old enough to make smaller communities for themselves.

I remember the Abt Associates study that showed that group size was a factor in quality. We never knew that before. I think group size is a very important factor and it goes across different ages. It boils down to be fairly straightforward simple mechanisms. It is easy to stay away from school and cut classes and finally drop out if nobody knows who you are. You are anonymous.

So it is our responsibility to ask policy makers who would rather say how much does it cost, what benefits are you getting? What are the dropout rates? That is why Valerie Lee's work is so good. She used large samples. That is why something that Rutter said today is wise. It is easier for us to do the small-scale study, the clinical study with a dozen people or an experimental study with 60 people. However, what convinces people are these large studies with samples of thousands. Valerie Lee tries to do that kind of work. We are going to have to do more of it. Rutter emphasized that for me today.

The problem is, and, I hate to break this to the social scientists among you, but social scientists do not make policy. Our task becomes something like the kind of role I have tried to play over the years in walking between knowledge and policy construction and trying to convince decision makers by telling them what the evidence is. That is a role that we are all going to have to play. We are not taught in graduate schools to do that, unfortunately. That is why Lynn Kagan and I developed the Bush Center at Yale, to train people to do exactly that. We should be teaching everyone more about what is happening at that intersect between knowledge and policy making. This trend in linking the two is increasing.

It was very new when Lynn Kagan and I started, 20-some years ago. Where we have a strong empirical case, we need people in our field to carry the message. There are a few that have credibility, the Julius Richmonds of the world, the younger Bronfenbrenners and Michael Rutters. They will get hearings with decision makers. Things have gotten better, but when I started out it was tough. You were considered to be prostituting yourself if you tried to talk to a decision maker.

One of the great child psychologists of my lifetime once took me aside and said, "Ed, you'd be a first-rate child psychologist if you could just give up this policy nonsense." I chose not to and it has been a rewarding life, and I have tried to convince others to follow. However, it always hinges upon Hagen's question. When we have a good solid base of evidence it is not enough to present your evidence in a book or a report; you have to make sure that that evidence is known. It always amuses me that if one writes an article for *Child Development*, and 300 of one's peers read it, one is a success. If one writes a piece for *Parents Magazine* to influence how people are raising their children using the knowledge that we have and 8 million people read the article, one has prostituted oneself. I am saying that one of the sadnesses to me, and Hagan's query brings it home to me, is how much we know that we never quite manage to get into practice. We have to work harder at it if we want to impact people's lives for the better, which is the bottom line for me.

Rutter: I agree with what Zigler says, but getting policy makers to actually pay attention to evidence is incredibly difficult. Like him, I have tried through my career to span the two, but for example, *Fifteen Thousand Hours*, which he was kind enough to remark positively on, came out in the year of a British general election. I was in a sour sort of way amused by the fact that both the main political parties quoted our book to support their manifesto. Of course they quoted entirely different findings. They took the bits that suited them. So it is very difficult to get people to understand the way in which one should use science. I think that the United States is rather better at this than Britain.

In my younger days I was involved in a tennis match with the House of Commons. It came up in conversation after the game how few scientists there were in the House of Commons. I said, "Yes, that does seem a pity, but what would you want from the scientists?" The answer was, "We want facts." They were completely taken aback when I said, "But that actually is not what science is about at all. The facts are the epiphenomena of science. Science is how you solve problems. Of course you want it to lead to solutions, but it is posing questions in ways in which you can find out whether this or that is going to work better." They looked at me as if I had come from Mars. The same sort of problem remains. Although I have to say, in my discussions with American politicians, there is more of an understanding here than there is in Britain.

Zigler: It is not easy. I agree with Rutter on that. That it is worth doing I have already emphasized. I have been a player in Washington for 35 years and I am always invited back whether they are Democrats or Republicans because there is an old saying, and it probably has some truth to it, that one of the reasons they want facts is there is a sense that knowledge is power. That is true in Washington; that is true everywhere. If one knows something that other people do not know, it has value. We have hearings in Washington all the time. I have testified at hundreds of hearings. I have had a chance to say the kinds of things that Hagan's questions raise. What is size? How hard has it been for us to convince people that quality is important? If one is straight with politicians, one is welcome.

I have been to some awful hearings and believe it or not these hearings are devilish things. I worked for 2 or 3 years on a bill that would develop a child care system. It was the Child Development Act of 1971. The bill passed Congress, but was vetoed by President Nixon so we never got a child care system in this country. Be that as it may, there were a lot of hearings on it. Of course, there were conservatives in Congress. Senator Buckley, from New York, called as a witness a psychoanalytic social worker who came before the committee and said how researchers could pick and choose the information they want. If one gets the right witness, one can hear anything one wants to hear. Researchers have become very good at that. I was sitting beside him because I was testifying too. He dredged up the old data about children in institutions. If you do not remember, Renee Spitz did a classic work many years ago. While it was critiqued by Goldfarb and others and had some problems, it basically demonstrated that children in institutions have terrible outcomes. It is not so far from the Romanian situation with children in orphanages. He equated that with child care. If children are in child care they are all going to look like the children in Spitz's study. I do not know if you ever heard about it, but children go home from child care. I remember vividly. You can always get a witness to testify to just about anything. However, if one is going to have staying power in Washington, what I have learned is tell the truth, do not load the dice, and summarize the evidence in as honest a way as one possibly can. If one does that, one develops credibility. I have never seen that gentleman again. This was 1971. Buckley left the Senate. His expert vanished from sight. Be willing to tell things that you do not like. The evidence is tough. Sometimes evidence does not support what you believe. However, if all you are there for is to be an advocate and argue for what you believe, you should not have credibility. We have got to present our knowledge honestly.

Rutter: The one area where real progress has been made, which is not policy in quite the same sense, is family court. The first time I did any court work, 30 or 40 years ago, expert witnesses were very much pressed to say that if this course of action happens this child will become schizophrenic, psychopathic, and so forth. The courts were very resistant to any kind of probabilistic answer; it depended on how the child was dealt with and what other things would happen. That has now completely changed. Family courts have a problem-solving approach, which is based on understanding probabilities and is based on understanding that there are not absolutes in this and that one needs to look at several alternatives. That has been a revolution. It is not, I am afraid, paralleled by the way children are dealt with in criminal courts. That is a different ball game altogether. I do not know to what extent things have changed in the family courts here in the same way they have in Britain.

Hagen: The family courts here have been in general better than the other courts in allowing individual considerations to be made, bringing in different kinds of reasonable knowledge and so forth. The most troubling thing happening here is that children are being put into the adult criminal court system at younger and younger ages. Is that happening in Britain, in Europe? Or is that just an American phenomenon?

Rutter: It is largely an American phenomenon, but that is because your law of criminal responsibility works differently from ours. Of course, you also have a huge variation among states, which we do not have.

Zigler: There is another very good example. I was thinking of a report I read by a group in Washington about treating children as adults if they commit a crime, and making them do the time. This punishment mentality that we have adopted is so contrary to the evidence. All the evidence points to if one goes the usual route; these children do a lot better. What happens to these children in the adult system turns out to be disgraceful. All the evidence indicates that. There is study after study that is summarized by this brand-new report. So you are right—that is one of the absolutely devastating things that has happened in this country. We have to counter that with early prevention and intervention. Before he died, Elliot Richardson, one of our great public servants, was very active in a group called Fight Crime, Invest in Children where some of our prevention notions came from.

We now have a huge body of evidence from a high school project done by Ron Lally, a review done by Hiro Yoshikawa in the *Future Of Children*, and one that I did in *American Psychologist*, looking at the same evidence that the prevention route is probably going to turn out to be a lot more effective. We have a strong ally in Janet Reno who has adopted that point of view. Early environments are key.

If you do not believe in the importance of mothers, look at David Olds' recent work. In his study, he never saw the children. He has a very interesting model. Nurses are home visitors. The nurses worked with the mothers. He got what he was looking for: less child abuse. These are mothers of first-borns, from the lower socioeconomic class. Very impressive! However, what is interesting, and that is why longitudinal work is so important, is that he followed those children that he never saw. Fifteen years later, those children are involved in less crime and delinquency.

The interesting thing to me is variation in programs. That ought to be looked at a little bit more. The only long-term study I have seen that has not reported lower crime and delinquency rates has been Craig Ramey's Abecedarian Project. Now, is it accidental that Ramey's project has never believed in working with parents? It looks to me like what happens is that the real mediators, the mechanisms of that relationship between the child and positive outcomes, is going to turn out to be how you change the parent. That is why we might still be better off with two-generation programs. However, even if you have a one-generation program working just with the parent, you wind up getting benefits for the children as demonstrated recently by Olds. That is something that is easy to sell.

A lot of the action now in this country is at the state capital. So when those of you try to impact policy, remember your own state capital. It is easier to do, by the way. You are liable to know somebody and they care more.

When I travel around to these state capitals they will say they are so sick to death of building prisons. What do you think they pay a prison guard in the State of California? Prison guards are paid $65,000 a year. The cost is overwhelming the state. Therefore, they are receptive to anything that comes along that promises to cut down crime and delinquency.

Comment: Ed, you maintain a certain level of optimism, no matter what. It is wonderful!

Contextual Effects and Developmental Competencies in African American Children and Young Adults

CHAIR: Gontran Lamberty
DISCUSSANT: John U. Ogbu
PRESENTERS: Maureen M. Black, Margaret O'Brien Caughy, Joanne E. Roberts, Frances A. Campbell, Gontran Lamberty

There is an urgent need for well-designed research examining the development of African American children. Research findings focused exclusively on African American child development was presented. Both studies of children exposed to risk factors as well as studies of children raised in more normative circumstances were included.

Competence of African American Children With Failure to Thrive

Maureen M. Black, Howard Dubowitz, Mia Kerr, Ambika Krishnakumar, Raymond H. Starr

(Summary not available at time of publication)

The Context of Parenting and Developmental Competency of African American Preschoolers

Margaret O'Brien Caughy, Kim Nickerson, Patricia J. O'Campo, Suzanne M. Randolph, Meicheng Wang

(Summary not available at time of publication)

Child, Family, and Child-Care Factors: Predictors of African American Children's School Transition

Joanne E. Roberts, Margaret R. Burchinal, Sandra C. Jackson, Susan Zeisel

This presentation examined how risk and protective factors within a child, family, and community during the first 5 years of life influence children's success in school during kindergarten and 1st grade. We also examined if children's academic outcomes at the end of 1st grade were predicted from models that included early childhood family experiences, language at entry to kindergarten, and concurrent classroom and family measures. Seventy-four African American children entered the study between 6 and 12 months of age and were recruited from nine community child care programs in two small southern cities. Upon entry, ⅔ of the children were from families living below the poverty level, with 29% of their mothers' terminal degrees less than high school and 29% at the high school level. During the first 5 years of life, children's middle ear and hearing status were documented repeatedly and language development, quality of the child care environment, and the responsiveness and support of the home environment were assessed annually. School readiness and achievement measures were completed at entry to kindergarten, and at the end of kindergarten and 1st grade.

We have previously reported that the number of social risk factors (e.g., living in poverty, stressful environment) present in a child's environment were significantly related to measures of children's language skills during the first 3 years of life (Burchinal, Roberts, Hooper, & Zeisel, in press; Hooper, Burchinal, Roberts, Zeisel, & Neebe, 1998). Higher quality child care and child cares that met professional recommendations regarding child-adult ratios had children with higher scores on measures of language development during the first 3 years of life (Burchinal, Roberts, Nabors, & Bryant, 1996; Burchinal, Roberts, Riggins, Zeisel, Neebe, & Bryant, 2000). Children from more stimulating and responsive homes were also reported to have higher scores on language measures during infancy and the preschool years (Roberts, Burchinal, & Durham, 1999; Wallace, Roberts, & Lodder, 1998).

To complete these analyses, several summary variables were created: (a) early childhood family/child care environment; (b) child's language skills at entry to kindergarten; (c) child's narratives skills at entry to kindergarten; and (d) child's emergent literacy at entry to kindergarten. Study results indicated that the responsiveness of the home environment and quality of the child care environments influenced children's language development and emergent literacy skills at entry to kindergarten. Early childhood child and family characteristics were also related to reading and math scores at the end of 1st grade. Analyses also support the role of language and emergent literacy skills at school entry in affecting children's school performance at the end of 1st grade. Children's emergent literacy skills at entry into kindergarten mediated the relationship between family background factors and children's reading skills at the end of 1st grade. Children with better reading skills at the end of 1st grade tended to enter kindergarten with better emergent literacy skills. Likewise, children's language skills at entry into kindergarten mediated the relationship between family background factors and children's math skills at the end of 1st grade. Children with better math skills at the end of 1st grade tended to enter school with stronger language and emergent literacy skills and had mothers who were able to communicate information more clearly during a school-like task.

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■ High Quality Child Care Has Long-Term Educational Benefits for Poor Children

Frances A. Campbell, Elizabeth Pungello

(Summary not available at time of publication)

Culture: What Is It? Who's Got It? Why Does It Matter? Implications for Research and Practice With Children and Families

CHAIR: Carol L. McAllister
DISCUSSANT: Hedy N. Chang
PRESENTERS: Carol L. McAllister, Jane Dirks, Gina U. Barclay-McLaughlin, Wrentha A. Julion

In recent years, there has been increasing attention to issues of culture and cultural competence among practitioners and researchers of early childhood programs. One result is increased awareness that culture is intimately involved in the process of child development itself. Aside from physical growth and emotional attachment, learning the basic elements of one's family and community culture is perhaps the key task of early childhood. Cultural values, in interaction with social and economic structures, also fundamentally shape the diverse and changing contexts in which children grow and develop. A component of that cultural context which directly influences early child development is the complex of ideas and routines that constitute the parenting beliefs and practices of individual families. Also of importance are community norms and values concerning children and their care. The enactment of public policy regarding children and families could in fact be viewed as a process of (usually unequal) cultural negotiation around such community norms and values.

In spite of this increased attention to the issue of culture, we often operate with inadequate and overly simplified understandings of this important concept. For example, it is very common in the U.S. to conflate culture with race or ethnicity. The assumption is made that racial/ethnic identity directly and simplistically determines culture. This leaves out other possible experiential determinants of culture such as class, gender, locale, occupation, education, religion, and individual family history. A related problem is the tendency to overlook the cultural content of ideas and practices that are common among those in the supposed "mainstream." One result is a failure to examine the cultural assumptions of policy-makers and the public policies they promote. Finally, we need to note the continuing danger of attributing to "culture" those aspects of individual or collective behavior that are better understood as responses to social and economic stressors faced by families and communities, especially those of low-income or "minority" status.

The presentations in this symposium are intended to address these shortcomings and put forth some alternative strategies for examining issues of culture in the lives of young children and their families. Each attempts a cultural analysis of key national developments, welfare reform in the first case, and fatherhood initiatives in the second, which are of considerable importance to low-income families and programs serving them. Both presentations draw on in-depth qualitative research with low-income parents to explicate their own cultural understandings of parenting and child development in relation to these two policy changes.

Working with some basic anthropological definitions of culture, the presentations will (a) explore the cultural meanings of activities such as parenting and work among low-income families involved in an Early Head Start program in Pittsburgh, PA and a parenting support program for fathers in Chicago, IL; (b) investigate contradictions and convergences between these meanings and those implicit in recent policy initiatives around welfare and fatherhood; and (c) attempt to identify cultural assumptions as well as concealed cultural elements that fundamentally shape current national dialogue in these two policy areas. The goals of the symposium are to encourage both researchers and practitioners to refine the understandings of the concept of culture and its importance in the field of child development, and to explicate some of the cultural dynamics of these new policy initiatives to help early childhood programs more effectively support children and families.

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Parents as Nurturers and Economic Providers: A Cultural Analysis of Welfare Reform

Carol L. McAllister, Jane Dirks, Laurie Mulvey, Beth L. Green

Welfare reform, including work requirements for parents of young children and encouragement of out-of-home child care for infants and toddlers, represents a major transformation in American public policy. Ethnographic research with parents enrolled in an Early Head Start program in Pittsburgh, PA provides an opportunity not only to assess the impact of the new welfare policies on children and families, but also to discern families' own understandings of the key cultural constructs of parenting and work, and the relationship of these understandings to the cultural assumptions embedded in the policies themselves.

This presentation involves a cultural analysis of welfare reform with a focus on (a) the divergence in meanings of parenting and work between low-income parents and policy-makers, (b) the resultant distortion in the current discourse around welfare reform, and (c) the implications for both policy implementation and the kinds of supports needed from early childhood programs to help families negotiate the transition from welfare to work. A further goal is to explicate some of the complexities of culture and to help refine this construct for more effective use in research and practice with children and families.

We begin with a working definition of culture drawn from the field of anthropology: culture consists of the shared ideas, beliefs, norms, values, and knowledge that people use to interpret experience and generate behavior. Based on this definition, we suggest that mothers in the Pittsburgh EHS program build their culture of parenting around the phrase "being there," which has three core meanings: being present and available to the child; providing physical affection, protection, and care; and emotional engagement. We might gloss this set of values and the activities they imply as "nurturing."

When we examine the cultural assumptions of welfare reform, we find the idea of nurturing largely absent. Instead, work, which is defined as involvement in a paid job and does not include the labor that goes into child care and rearing, is emphasized as the primary component of good parenting. This cultural conflict results in serious distortions in public discussions of this policy change, and diverts attention away from factors, such as low wages and lack of quality child care, that represent serious impediments to effective reform and family well-being.

This cultural disjuncture has implications for programs, which provide support to families as they negotiate the welfare-to-work transition. An example is a decision by the Pittsburgh EHS program to offer home visiting and child development services to relatives and neighbors caring for EHS children. This follows from the recognition that many EHS families, when responding to work mandates of welfare reform, prefer informal kith and kin care to more formally organized daycare arrangements. This is, in part, a cultural choice.

Cultural analysis, including of important policy initiatives, is critical for researchers and practitioners in the field of child development. It requires that we continue to refine and hone our understanding of the concept of culture itself, relating its dynamic character to the equally dynamic processes of parenting and child development.

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Fatherhood Ideals and Realities: The Voices of Noncustodial African American Fathers

Gina U. Barclay-McLaughlin, Wrenetha A. Julion

In recent years, several initiatives have been launched to encourage and support fathers' involvement with their children and families. These initiatives rest on certain beliefs about fatherhood and attempt to speak to the motivations and values of men as parents. A key question is whether the perspectives that guide fatherhood initiatives reflect and are sensitive to the cultural understandings of the fathers and families such initiatives are intended to serve.

This presentation discusses the findings of qualitative research with non-custodial African American fathers who are part of the Paternal Involvement Project (PIP) in the Chicago area. The main goals of this Project are to provide job training, increased self-esteem, and parenting support and information for low-income fathers. Our focus is on the fathers' own beliefs and ideas about fatherhood and their interpretations of their experiences in attempting to father their children. Our goal is to critically examine and inform policy initiatives around fatherhood as well as help strengthen efforts of early childhood programs in supporting father involvement.

One of the key findings of our focus groups and in-depth interviews with participants in the PIP is the complex interplay of cultural norms and values, on the one hand, and economic and social constraints, on the other, in shaping the fatherhood experiences and perceptions of low-income African American men. For example, consistent with several recent studies of African American fatherhood (Pettitt et.al. 1999; Zuberi, 1998; McAdoo, 1993, 1997; Fagan, 1996; Tiedje & Darling-Fisher, 1996), many of the fathers we interviewed spoke eloquently about the importance of emotional engagement with their children, and their commitment to be involved in day-to-day parenting activities.

At the same time, we found that mainstream gender ideologies of the male breadwinner were not absent from the self-perceptions of PIP participants. Historically, African American men were often prevented from playing this and other parental roles. Today, class and racial inequalities continue to create barriers to low-income African American fathers performing the role of economic provider. In the case of the fathers we interviewed, factors such as poor educational opportunities, negative neighborhood context, and high rates of involvement in the criminal justice system further diminish their earning power. For some of the fathers in the PIP, these structural constraints become translated into a cultural perception of "inadequacy," lowering self-esteem on an individual and collective level, which, in turn, may interfere with effective and engaged parenting.

This kind of cultural analysis helps to unpack some of the dynamics of fatherhood among low-income African American men, including some of the causes and consequences of phenomena such as "father absence." It reveals that the root causes of such absences are found not in the motivations or aspirations of individual fathers, but rather in the economic and social conditions of US society. Fatherhood initiatives, as well as early childhood programs that want to involve fathers, need to give attention to these dynamics and to the complex interplay of cultural and socio-economic factors in fathers' lives and self-perceptions.

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Cultural Perspectives on Home/School Continuity

CHAIR: Lois-ellin Datta
DISCUSSANT: Elizabeth Graue
PRESENTERS: Eden T. Inoway-Ronnie, Nurit Sheinberg, Elizabeth DeMulder, Leo Rigsby, Angela Willson-Quayle

■ Southeast Asian Parents' Concerns about High / Scope and Developmentally Appropriate Practice in Head Start Classrooms: Lessons From an Ethnographic Study

Eden T. Inoway-Ronnie

This presentation explores Southeast Asian Refugee Head Start parents' concerns about the use of High/Scope and Developmentally Appropriate Practice (DAP) approaches as implemented in two racially and ethnically diverse Head Start classrooms.

The findings reported are part of a broader 2-year study of White teachers' work in ethnically and racially diverse Head Start classrooms (Inoway-Ronnie, 1996). Research involved two walk-in programs with Hmong, Cambodian, Laotian, Vietnamese, African American, Latino, and White children. The majority of children in the primary site were Hmong. Nearly all of the Southeast Asian families were recent immigrants. Many parents spoke limited English and had little formal education. Both classrooms had White female teachers. From 1993 to 1995, qualitative data were gathered through extensive observations, interviews, and analysis of documents.

Many of the Southeast Asian parents expressed concerns about the instructional practices in the classrooms. From their perspective, children were given far too much undirected "free time." These parents expressed their desire for more direct instruction. They wanted teachers to explicitly teach children skills such as how to write their names, count, and recognize colors and shapes. They placed a great deal of emphasis on the importance of their children learning to speak and understand English before entering kindergarten in order to avoid placement in English as a Second Language (ESL) programs. The teachers, aware of parents' concerns, yet also cognizant of the research and local program support for the approved curriculum, explained to parents their belief that all the children would develop the desired skills and abilities.

Research by educational anthropologists reveals the importance of recognizing the tacit and often unconscious nature of certain cultural differences (e.g., Philips, 1983). With this in mind, this presentation explores three factors that influence the concerns expressed by Southeast Asian parents. One factor may be that the classroom practices conflicted with some of the parents' deeply held cultural beliefs. Child-centered education, more common in Western societies, may conflict with certain non-Western cultural beliefs (see Spodek, 1999; Timm & Chiang, 1997; Tobin et al., 1989). A second factor may be that many parents were concerned that approaches used in the classroom, while successful in certain settings, failed in their children's classrooms to provide the extensive practice they believed necessary to master the English language. Many parents sought more direct instruction in English in the classrooms in part because they were unable to provide this assistance on their own. Finally, a third factor may be that parents wanted Head Start to give their children a familiarity with the forms and patterns of schooling they believed their children needed in order to succeed in public elementary school and beyond (Delpit, 1988).

It is important to note that Southeast Asian parents are not alone in raising concerns about the types of classroom practices and structure of activities found in these Head Start classrooms (e.g., Lubeck, 1985). Findings suggest the need to address the tension between the goal of affirming cultural differences and enhancing academic success by socializing to mainstream norms of behavior.

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■ Latino Mothers' Cultural Models of Childrearing in the Context of a Head Start Program

Nurit Sheinberg

Head Start programs across the country are faced with the task of serving an increasing number of immigrant families. However, we have little information about the socialization processes of minority families in the United States. Most of the available socialization models are based on White American concepts that do not reflect in an accurate way the processes present in those families (Garcia-Coll, 1990). This creates a serious problem when we consider the diversity observed in the United States, particularly in the case of Latinos, which are the fastest growing minority group in this country. New socialization models are needed that include a complete range of normative beliefs and experiences of Latino families (Bornstein, 1991; Garcia-Coll, Meyer, & Brillon, 1995). This will help Head Start programs serve Latino families in an effective and respectful way.

This paper presents the results of a qualitative study of a group of immigrant Latino mothers whose children attend a Head Start program in a working-class northeastern city. The paper addresses the cultural models of childrearing these mothers possess. The mothers presented four child-rearing models that seemed to be influencing their parenting style and perceptions of Head Start:

1. Mothers as teachers, supporting their children's academic success.
   This group of mothers perceive themselves as active agents in their children's development and socialization process. They shared an interest in having their children excel academically and considered themselves responsible for supporting their children's schoolwork. The most important aspect of their role as teachers was expressed in relation to the maintenance of Latino culture.
2. Mothers as guides, creating "niños educados."
   This model emphasized their role as guides in shaping the characteristics they want their children to possess. These characteristics can be clustered into three groups: (a) proper

demeanor (Harwood, 1992), (b) being decent and having personal dignity, and (c) an emphasis on interpersonal relationships. They espoused the notion of *"educación"* as presented by Reese, Balzano, Gallimore, and Goldenberg (1995). They wanted their children to succeed academically while being respectful and behaving properly.

3. Mothers as protectors and authority figures.
   These mothers accentuated the importance of control and authority in their role as mothers. They voiced the ability to instill obedience and respect in their children as a central aspect of good Latino parenting. However, they perceived their ability to be able to have control over their children to be diminished by threats present in the environments they lived and undermined by social institutions and values in the United States.
4. Mother as cultural mediator, developing bicultural children.
   This group of mothers has to constantly deal with two distinct and at times conflicting cultures. They have to make decisions about which aspects of their cultural models are salient enough to be transmitted to their children, even if they run counter to mainstream society, and which aspects will need to be modified to function in the United States. The different values emphasized at home and at school can create conflicts between children and parents, and between the family and the school.

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■ Immigrant Parents of Preschoolers and Teachers Explore Cultural Issues in Education: Contrasting Parents and Teachers Assumptions and Concerns

Elizabeth DeMulder, Leo Rigsby, Angela Willson-Quayle, Selma Caal

Throughout children's development, parents and teachers provide important support to help them connect new experiences to established knowledge as an aid in their learning (Vygotsky, 1978). This support requires that parents and teachers have knowledge of and can respond to the child's individual experience and needs. There is an increasing recognition that the teacher's awareness of and respect for the child's home culture and "lived curriculum" (Yancey, 1998) helps children to make these important connections. When expectations, values, and experiences of the home culture conflict with school culture, children may have great difficulty in resolving conflicting expectations. Unresolved conflicting expectations can lead to frustration, disengagement, and rebellion.

While greater understanding of children's individual needs and experiences can be facilitated through communication, attempts to create dialogue around cultural issues do not appear to be common, neither within schools nor in the wider society. McCollum (1996) suggests that parents who are immigrants and teachers of immigrant children find it difficult to overcome communication barriers. The efforts of each group are limited by lack of mutual understanding.

In order to increase understanding of different perspectives with the goal of supporting immigrant children's learning in schools, the voices of immigrant parents as well as teachers need to be heard.

This paper reports on the perspectives of immigrant parents and teachers who participated in a series of discussions about education. Immigrant parents, whose children attended a subsidized preschool program targeted for low-income families, participated in focus group sessions and individual interviews over a period of about 18 months. Preschool parents came from various Spanish-speaking cultural backgrounds, educational experiences, and stressful life conditions. Because parents were more comfortable speaking in their native language, a bilingual research assistant conducted the focus groups in Spanish. The conversations were audiotaped, translated, and transcribed by the bilingual research assistant. Prekindergarten-12th-grade teachers participated in an on-line web discussion over a period of several months as part of a course concerned with language and culture. In addition, preschool teachers participated in semistructured interviews focusing on the challenges immigrant children and their families face.

A prevalent theme in discussions with parents and with teachers was discipline at home and at school. Parents and teachers tended to have different perspectives concerning parent and teacher responsibilities and appropriate disciplinary styles. Parents in the focus groups suggested that teachers and administrators fail to use proper authority and control to discipline their children in school. Several teachers, on the other hand, expressed the opinion that disciplinary problems at school are due to parents' lack of authority and control over their children's behavior at home. Interestingly, several parents suggested that schools and the larger society deny parents the authority to control their children at home. That is, many of the parents in the focus groups felt that their ability to effectively discipline their children—through corporal punishment—is compromised because of the prevailing negative view in the United States of this form of discipline (a view that parents believe is reinforced in the school setting).

Focus group sessions, interviews, and on-line discussions uncovered different perspectives on a variety of issues that have important implications for children's education in our multicultural society. Communication about differing expectations and beliefs is a first step toward helping parents and teachers work together to support children's development and learning across home and school.

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Neighborhood and Community Influences on Child and Family Development

CHAIR: Willie Epps
PRESENTERS: Francene Williams, Greg Duncan, Robin Jarrett

Willie Epps: Head Start is a grassroots agency that works with low-income families and children, and most of the neighborhoods our children live in have numerous problems, such as high crime rates, high dropout rates, violence in the community, and high teenage pregnancy rates. Head Start programs are located in these communities and neighborhoods. Many people look to Head Start to provide the kinds of services that will eradicate or eliminate these problems. While Head Start cannot be everything to all people, we need to understand the strategies Head Start can use to try to respond to those problems. We will discuss the influence of neighborhood and community on child and family development, and how Head Start can work with governmental agencies to relocate families into more affluent areas.

Francene Williams: I would like to discuss briefly recent trends in the Fairfax, Virginia community that have had a great impact on our families. Fairfax County Head Start serves 1,639 children through a variety of funding sources. Fairfax County is outside of Washington, D.C. It covers 399 square miles and houses close to 966,000 people. It has been known recently as the Silicon Valley, because it has attracted many high technology jobs. According to the *Washington Post*, the median annual income in Fairfax County is more than $90,000, compared to the national median of approximately $37,000. The unemployment rate is 1.5%. Although these statistics show that Fairfax families are living well and have many job opportunities, we still have a poverty rate of 3.3%, which is slightly more than 31,000 people. Most of the high-paying jobs in the community require special skills, and more than 50% of the people 25 years and older in Fairfax County have college degrees.

In contrast to what I just described, our Head Start families have a median annual income of $7,000 to $12,000 a year. Most of our families do not have college degrees, and in such a competitive community, they end up with the lower-paying jobs. Many of our Head Start families work several jobs in order to make ends meet.

With respect to housing, Fairfax County provides temporary assistance to 1,802 needy families. A percentage of those families were homeless. Most of the county's low-income families are people of color. A recent report to the County Board of Supervisors stated that homelessness had increased from last year to 12.5%. The report discussed the need for an additional homeless shelter and the need for affordable housing. The current market rate for an apartment is $849 a month. The median price for a home in Fairfax County is more than $264,000 dollars. The increase of high technology jobs and thriving economy have had an impact on Head Start families as many rental property owners have decided that they want more money for their property. As a result, since March 1998, we have lost 300 units of subsidized housing. In some areas, citizens no longer want Section 8 housing in their neighborhoods because they think it increases crime and brings their property value down, which also has had a great effect.

I also would like to talk about the characteristics of our Head Start families. In the past 5 years, demographics have changed, and we have gone from serving predominantly African Americans families to serving families from more than 63 countries. More recently, the population composition has shifted from serving a majority of Hispanic families from Honduras, El Salvador, Guatemala, and Bolivia, to include an influx of families from the Middle East, Korea, Vietnam, and Africa, from such countries as Ghana, Nigeria, Liberia, and Somalia. Currently, 8% of our families are White, which includes Indians and those from the Middle East; 17% Asians;

36% Hispanics; 28% African American; and 1% other. We rely heavily on interpreters and translating services.

This has had an impact on the way we provide services to our families. One challenge is that more than 50% of our families do not speak English. Because of language or cultural barriers, families are at times unable to access the rich resources in Fairfax County. Secondly, even though we have many resources, some of the programs are not able to handle outreach, accommodate translations into different languages, or grasp the diversity of cultures. Lastly, some of our families are illiterate in their own language, which makes it difficult for them to learn the English language and to get the job training they need. Also, it limits their access to the educational opportunities available for other citizens.

We also have families who are reluctant to use social services, such as food stamps and Medicaid, because they feel that if they use these services, they might jeopardize their ability to attain U.S. citizenship. There are times too when families, once enrolled in a program, are reluctant to become involved due to language barriers and lack of transportation. Fairfax County does not have the mass transit available in New York, Philadelphia, and other places. Public transportation is limited, and one needs a car to get around.

Given this situation, I would like to report what Fairfax County Head Start parents say they need according to a survey. First, they report a need for affordable housing, particularly in a community with good schools, recreation centers, and less violence. Secondly, they talk about the need for affordable child care, especially infant care, care for school-age children with special needs, and care for children at nontraditional hours. They also want special job training and better jobs with benefits, such as health insurance. Male involvement leaders in the program report that fathers want jobs in which people talk to them respectfully and respect them as the head of the household. They also want literacy programs, such as ESL, GED, and computer training. All of our families want computer training, because they see that technology jobs are a way to improve the quality of life of their families.

I have talked about these challenges—the highly competitive jobs, the high incomes, the lack of efficient transportation, and the recent immigration—and how they closely relate to each other and affect our Head Start families. Although Fairfax County has made strides in assisting our families, I ask three basic questions of researchers. First, how can researchers conduct projects that would develop sound practices that can be used, not just in my program, but in any Head Start program, to help families strengthen their ability to improve their lives? Secondly, when we know families live in homeless shelters and have difficulty getting jobs and finding affordable housing, what are some sound practices that will enable us to deal with these issues? How can Head Start advocate for affordable housing when the median price for a home is more than $260,000? How can we help our families obtain high-paying technology jobs when they have low literacy skills?

Robin Jarrett: I would like to share my insights from qualitative research. I study developmental pathways in inner-city neighborhoods, particularly among African American families and children. What are some of the things that parents do to negotiate on behalf of their children? What are the developmental stages and sequencing, which may look different from what we have read in the textbooks? I look at the developmental competencies that children learn in inner-city neighborhoods and what that means for developmental outcomes.

Researchers are starting to think about development in broader ways. Qualitative research provides a strategy for understanding the lives of diverse children based on in-depth interviews and participant observations. Researchers go into the neighborhoods where families live. They spend time there with families. In our studies, we have always gone with families on their daily rounds to the WIC office, to visit with kin, or to the food pantries. By spending time with families, we get an intimate view of their lives. We have come to understand the complexity of their lives, as well as the kind of dynamism that occurs when people are living in these settings.

Anyone familiar with Bronfenbrenner's work or other ecological models knows that development is influenced by the setting in which it occurs. In recent years, the impact of neighborhoods on family development and child-youth processes has been studied. Ethnographic research tells us about the ecological settings—the social, economic, and institutional characteristics of neighborhoods—that influence the lives of parents and children. Sometimes neighborhoods look identical on demographic features—they may have 50% poverty levels—but when one is actually there, it becomes obvious that the physical ecology of some of these neighborhoods look very different.

We selected neighborhoods based on poverty levels, but when we worked in the neighborhoods, we found that they were sometimes differentiated physically. One interesting way that neighborhoods are differentiated is by the housing stock. Some of our families lived in high-rise dense apartment buildings. Others were living in impoverished neighborhoods with single-family dwellings. As we talked to families, we found that the type of housing made a difference, particularly in supervision of children. For example, families who lived in the dense high-rise buildings found it more difficult to supervise children. They either had to keep them isolated, spend inordinate amounts of time to supervise them, or leave the children on their own. We also found that even when families were living in impoverished neighborhoods, living in single-family dwellings sometimes made it easier for them to supervise children in backyards and to provide more controllable recreational activities.

We also found that neighborhoods were differentiated internally. Our families told us—and these are their words—that there were good blocks and bad blocks. Typically, the good blocks were the blocks where families were leading conventional lifestyles. These blocks seemed to be cleaner, and the families were more family-oriented. By hanging out in neighborhoods, we found that there are also safe and dangerous niches in neighborhoods. There were places that families felt comfortable going, but there were also places that were off limits. Sometimes these were distinguished by gang boundaries. Neighborhoods have rhythms, which one does not necessarily see in demographic profiles. There are times that families go out and do family things, such as shopping and banking, but then there are times when families retreat to their households because a different kind of lifestyle prevails, usually due to the drug culture.

When we focus on the resources that neighborhoods have, we know that poor neighborhoods are quite limited. They have poor quality parks and recreational activities and joblessness. There is a decline in informal social control—the people sometimes known as the old heads of families or the "big mamas" who took a real interest in children. These are the kinds of factors that constrain opportunities for child development.

However, at the ground level we found that there are also good quality resources in many poor neighborhoods. They were limited, but we found that there were caring adults. Certainly, many of the directors of the Head Start programs that we worked with talked about how they got out and hustled for families. In our current welfare study, we have run across marvelous people, such as Major Adams, a 50-year advocate in the Henry Horner Homes who fights with the police when they are mistreating families, fights with the school bureaucracies, and has been an important person in this neighborhood. Certainly, there are what we call urban sanctuaries. They are sometimes hard to find, but they do exist in poor neighborhoods.

This diversity of local resources structures two major pathways for inner-city children. Ethnographers have called them the street and the nonstreet pathway. Although they are often talked about as polar opposites, these two pathways often intersect for families who live in inner-city neighborhoods. Thus, it is a continuum. We sometimes find children who ultimately have conventional outcomes, but they dabbled a little in street life. Sometimes children who were on the street pathways have their moments in the conventional pathway as well.

When we talk about the street trajectory, it is usually focused around this individualistic and predatory street ethos found in the street subculture. Social relations are typically embedded in peer-based associational groups. These peers are contradictory in some respects in that they induct young people into the more problematic aspects of community life. However, they are also important in terms of providing alternative definitions of self, providing a place to be somebody and sometimes the kinds of scarce resources that parents are unable to provide. We find that children are learning to hustle and to otherwise survive under problematic conditions. If there are no interruptions or interventions for these young people, the street system prepares them in adulthood for marginal social and economic roles in the local neighborhood.

In contrast, the nonstreet developmental pathway focuses around a conventional social mobility ethos. It is characterized by involvement with conventional institutions and adults. These children and young people are learning behaviors and roles that will allow them to function in conventional settings, both in the local community as well as on the outside. The nonstreet system prepares children in adulthood for mainstream parenting, family roles, and conventional employment.

Parents do matter. Neighborhoods are not altogether deterministic in their effects on children. There are ways that parents can negotiate on behalf of their children to insulate them from the effects of neighborhood impoverishment. We find that competent parents have a repertoire of strategies. They are competent in resource-seeking behaviors. They institute in-home learning strategies, as well as stringent parental management strategies.

Parental management strategies have been talked about both in the quantitative and the qualitative literatures. In doing reviews of this literature, we found almost 15 to 20 different strategies that families are using. They monitor the whereabouts of their children. They are in control of their time and space. They designate good children and bad children and decide whom their children are going to play with when children are very young. Sometimes they chaperon teenagers on their daily rounds throughout the neighborhoods. Together these activities promote or enhance the likelihood that children are going to bypass the risks associated with poor neighborhoods.

Traditional thinking suggests that development is a linear process as young children move from one stage to the next. However, for poor African American children, this process is far more circuitous as they are pulled by the opposing street and nonstreet pathways. When we look at life history interviews, children who later have conventional outcomes may, in fact, have spent time on the street trajectory and vice versa. Research tells us a number of factors that keep children on track for conventional development. One is parental monitoring. These children may also have conventional mentors—a caring adult, if their parents are not available. They also tend to be engaged with conventional institutions like recreational settings.

We also know about the factors that get children off track and make them vulnerable to street influences. These children tend to have limited parental monitoring. They are involved with street-oriented affiliations and tend to have limited institutional engagements with conventional organizations. However, ethnographies illustrate the difficulties that inner-city children have in staying on track for conventional development. There have been historical shifts in the meaning and content of children. There has been a general notion that childhood is a relatively protracted and carefree period. However, this notion is sometimes belied by what we find in the experiences of our children in inner-city neighborhoods. Some of these children take on responsibilities that many of us would associate with later stages of adulthood. They are taking on responsibilities, such as caring for younger siblings, being protectors in the neighborhood, providing meals, as well as being confidantes to parents in need of more assistance in the domestic domain. One problem with this developmental acceleration is that it emancipates children from adult control, making them much more vulnerable to the street influences that can waylay their development.

Clearly, some children experience a more sheltered view of childhood. We see children from some of our Head Start programs who are having birthday parties, playing in their backyards, and telling jokes. However, this kind of childhood is greatly dependent on certain kinds of family conditions. One, these families typically have the person power in the household that limits this need for major domestic contributions from children. This may be related to particularly strong kinship networks or access to other helping adults. A relatively sheltered childhood is also dependent on parents' ability to buffer their children from street-oriented peers and activities.

When we talk about what children learn, these competencies reflect the demands of the environment. Street and nonstreet pathways provide distinct developmental climates and foster different kinds of skills. Children on the street trajectory are learning to manage independently of adults, particularly, the dangerous sides of life. For example, one ethnographer talks about a 9-year-old who is exhilarated by her ability to elude the neighborhood rape man. We have preadolescent boys who are proud that they can physically defend themselves. We also find children who are economically savvy and have been able to extract resources from the researchers who come to learn about their neighborhoods. Children who are less involved with this street pathway also have to learn to manage in inner-city neighborhoods, and, in some respects, these children can be said to be bicultural. Their parents warn them about local predators, and they too must learn to hit the ground when gunshots ring out. However, these children also are learning other instrumental and social competencies associated with conventional development.

Development is the product of this dynamic interaction between children and significant others. There are a range of people who influence the shape and course of children's development. Children on the street trajectory are often involved with peers and nonconventional adults and adolescents. Peers, who are independent of adult control, are the most significant people in the lives of some inner-city children and often fill in where overwhelmed parents cannot. However, these autonomous peer groups on the street pathway simply do not have the informational, social, and cultural resources necessary for optimal development. Nonfamily teens and adults who are oriented to the street lifestyle also influence children on the street pathway. These people tend to serve as mentors and/or conduits to this particular lifestyle.

On the nonstreet, or the more conventional pathway, we see a different configuration of significant others. Family adults are the key people in the lives of children. They may be single mothers, social fathers, grandmothers, or even surrogate parents. Conventionally oriented people, such as nonfamily adults, such as teachers, big mamas, or the old heads, may sometimes fill in and provide discipline, nurturance, and care. Peers also are important in the lives of children on the more conventional pathway, but what is different is that these are adult-controlled peer groups. What adults do is inject conventional rules, prosocial activities, behaviors, and norms into the content of play.

The final area of development that I will talk about is developmental processes and gender. Boys and girls face different risks in poor neighborhoods. Boys are most exposed to the more life-threatening elements of neighborhood life—gang activity, drugs, and street violence. Boys also are more likely to be involved in street life for longer periods of time. Girls, on the other hand, face equally problematic, though sometimes less dangerous, elements of community life. Mothers talk about the risk of premature pregnancy for girls and its potentially negative effects on development. We also are starting to find in the ethnographic work a growing concern with sexually transmitted diseases for girls who are sexually active. Yet motherhood can sometimes change young women's lives in a way that seems to be absent for boys. Girls sometimes see motherhood as an opportunity to be good mothers, refocusing their attention on the domestic domain and leaving some of the more enticing aspects of street life.

These gender-based risks are also a concern of parents whose children are not on the street pathway. One mother, for example, talks about exiling her son from the local neighborhood. She sent him to live somewhere else because his life was in danger from the gangs. We also hear mothers talk about their daughters' physical development with great alarm. As girls develop much sooner, they are afraid that they will become sexualized in the neighborhood and see chaperoning as a way to deal with this.

I would like to talk about some of the implications from this qualitative work. The research examples presented focused on the lives of African American families and children, which clearly differ in some respects from middle-class counterparts. This kind of variability in development suggests the importance of doing more fine-grained qualitative work that focuses on the unique experiences of African American children, but also on the lives of children who are from different social classes, races, and ethnicities and who may be distinguished by immigrant status.

We can use this kind of research to build more accurate models of child development. The ethnographic research also suggests directions for multimethod collaborations that can include both qualitative and quantitative research. We can use ethnographic research at various stages in a multimethod study. We might use it at the beginning to develop culturally and contextually relevant instruments and measures. This work can identify the wide range, for example, of parental management strategies that we were able to pick up through our observations. Also, this qualitative work can specify quantitative models to better identify developmental processes as well as predict outcomes. Further, we can use ethnographic research at later stages of multimethod research, for example, to help interpret those puzzling findings for which we have no real answers.

Most importantly, this ethnographic research suggests some key questions for a broad research agenda on neighborhoods and development. Such research questions would include: (a) What are the characteristics of neighborhood contexts that affect development? (b) How do various neighborhoods, such as urban, rural, ethnic enclave, and working-class neighborhoods, compare to one another? (c) How do developmental climates differ for girls and boys? (d) What factors contribute to diverse developmental pathways? (e) How are developmental processes and pathways affected by stage of development, such as early childhood, preadolescence, and adolescence?

There also are implications for practitioners. This research has identified family, neighborhood, and individual factors that promote resilience or enhance vulnerability. This information can be used to develop contextually and culturally relevant interventions. The research also identifies the diversity of low-income families in inner-city neighborhoods. They have different abilities and different resources. This kind of diversity suggests interventions that reflect the specific needs of a range of families. The research also identifies the diversity of children's experiences in these neighborhoods. Some children have been sheltered, but many more children have been exposed to street life and the hardships associated with it. Practitioners will have to be particularly savvy in working with more mature children and be able to offer them a challenge to the enticements of street life. This research suggests the importance of collaborating with the well-functioning institutions and caring adults who live in these communities. These people know the neighborhoods intimately and can contribute through their collaborations to the likelihood of program success.

Greg Duncan: My talk today will address neighborhood effects on children's development. I will present results from a randomized experiment, which I worked on jointly with Jens Ludwig at Georgetown University. We examined the causal impacts of neighborhood conditions on children's development. Findings in Robin Jarrett's presentation cast doubt on how all-important neighborhood conditions are. She reported how in the exact same neighborhood one finds two different developmental pathways, which are probably more a function of the family situations of the children than the neighborhood in and of itself. Thus, I will address the extent to which neighborhood in and of itself affects children's development independent of family conditions.

I would respond in two ways to Francene Williams' questions. First, this experiment is an evaluation of the Section 8 residential housing mobility program. Thus, it provides solid evidence about how the offer of a Section 8 voucher can affect that family and the children's development in those families. Secondly, this research helps to address the public's imagination with regard to low-income families living in high-poverty neighborhoods. A substantial section of the public is willing to write off our high-poverty urban neighborhoods as hopeless. Our research relays that possibilities for change exist by providing families living in high-poverty neighborhoods with an offer to escape those neighborhoods and move to a more affluent neighborhood.

The kind of neighborhoods that I will be talking about are high-poverty neighborhoods in urban areas in the U.S., and there could be large impacts for changing neighborhood conditions for those neighborhoods, even though there may be much smaller neighborhood impacts at different levels of the economic spectrum.

This research is exciting because it provides a chance to address some important methodological problems in the quantitative neighborhood literature. Many studies have tried to relate neighborhood conditions to children's developmental pathways using nonrandom data. It is hard to infer from that kind of data what is happening. While the neighborhoods differ and children's developmental pathways differ, there are many other variables that differ as well, particularly family conditions. Families living in better neighborhoods have higher incomes. There tend to be more two-parent families as opposed to single-parent families. People have higher education levels, and there are more resources available.

If one takes families living in better and worse neighborhoods and observes children doing more or less well, it is unclear what the direction of the bias is from relating neighborhood conditions to the children's outcomes. One story is that these difficult to measure family conditions are leading families to live in better neighborhoods and to raise children with better developmental trajectories. It is a positive correlation story that leads one to overestimate the impact of neighborhood conditions on children. It should be attributed to families, but one attributes it to the neighborhoods because one has not been able to measure all of those characteristics that are leading families to live in better neighborhoods and have children with better developmental outcomes.

The other possibility is a negative selection process, whereby families with children who are starting to exhibit early signs of trouble are more likely to move to better neighborhoods. It is an agency story on the part of the parents, and it will lead the correlational study to understate the impact of neighborhoods. If one looks at these children in their new neighborhoods and they are doing well, it may be much better than how they were doing before, but one is not going to pick that up unless one has been following these children before and after the moves.

We were able to solve some of these methodological problems by relying on a randomized experiment, which randomly assigned families to treatment and control groups. It is the Department of Housing and Urban Development's Moving Opportunity Experiment. It started in the early 1990s and continues today. A 5-year evaluation currently is being launched, but the results that I will discuss came 2 to 3 years after the families were assigned to the different groups. The groups are from public housing projects in high-poverty neighborhoods in five cities around the country—Baltimore, Boston, Chicago, New York, and Los Angeles.

There was a large recruiting effort to try to get families interested in this program. When interested families came in for an orientation session, they were told that they had only about a ⅓ chance of being in the experimental group that would be offered an opportunity to move to a low-poverty neighborhood. They also had a ⅓ chance of being in a group that would be offered a Section 8 housing voucher, and they had a ⅓ chance of not getting anything. Almost every family who came in and heard the orientation session decided to take their chances.

About ⅓ of the sample was offered a Section 8 housing voucher. Section 8 is one of the largest housing programs in the country, serving about 1.5 million families. It is a voucher that enables families to move to an apartment or house that is of certifiable quality. It is essentially an opportunity for a family to move to a better neighborhood and obtain a financial subsidy that enables them to pay the rent.

The third group of families was offered a Section 8 housing voucher with the condition that they had to move to a low-poverty neighborhood, defined as a census track where fewer than 10% of the families are poor. To enable them to do that, they were given the same kind of housing subsidy as well as life skills counseling, such as how to balance a checkbook, be a good tenant, and understand what it might be like living in a different neighborhood. The counselors took them to visit apartments and houses in low-poverty neighborhoods. In contrast, the Section 8 only group was given the vouchers with no restrictions whatsoever on where they moved as long as it was to qualifying housing. There are long waiting lists for Section 8 housing vouchers, thus it was ethical to have a control group under these circumstances.

I will concentrate my summary of results with information from the Baltimore site. Prior to being assigned to one of the three groups, the families filled out a questionnaire. The target areas were several high-rise public housing projects in high-poverty neighborhoods. Almost all of the families were African American. Only families with children could qualify. Almost all families were single-parent families. Annual household incomes were about $7,000. Almost none of the families had a car that ran. These family characteristics were similar across the three groups.

Families also were asked if anyone in their household had been a victim of a crime in the last 6 months. Half of the families responded that they had. Through both the questionnaire and some focus group interviews, families were asked why they were interested in the program and what attracted them to the possibility of moving to a low-poverty neighborhood. The answers were not so much "to get my children in better schools" or "to get into a better apartment." Overwhelmingly, people said it was to avoid the gangs, drugs, and violence in their neighborhoods. These are disorganized, high-crime neighborhoods, and families want desperately to escape them. This experiment provided an opportunity for them to do so.

Not everyone who was randomized into the experimental group or into the Section 8 group moved within the 1-year period of eligibility after the point of randomization. In fact, about half of the families that were offered the opportunity to move to a low-poverty neighborhood actually did move. Meanwhile, 77% of the Section 8 families accepted the offer and moved.

The outcomes in terms of neighborhood conditions for these two different groups are rather different. Of the experimental group families that moved, 90% moved to neighborhoods with less than a 10% poverty rate. It was supposed to be 100%. By and large, everyone in the experimental group moved to a neighborhood with a dramatically lower poverty rate. The poverty rate in the housing project neighborhoods was about 60%, so this is a large change in terms of neighborhood conditions.

The Section 8 families, who were free to move to whatever Section 8 housing they could find, tended to move to areas with lower poverty rates than in the housing project neighborhoods, but it was more an average of 20-30% poverty rate than a 10% poverty rate. The experimental group families were much more likely to move to a neighborhood that had a low fraction of minority families. That differed from the Section 8 housing families, who were more likely to be in neighborhoods with minority families.

We used administrative data about juvenile arrests gathered by the State of Maryland. At the point of enrollment in the program, all families were asked to sign releases for various kinds of administrative data, including receipt of welfare (e.g., TANF), school records, and juvenile justice records. We obtained information about arrests, both before and after the move, for all of the children in these families up to age 18. Arrest data have their problems, since they are an indication not only of the behavior of the teens, but rather a combination of the behavior of the teens and the behavior of the police in these neighborhoods. Surprisingly, the probability of arrests is fairly similar across the Baltimore suburbs and urban areas. To the extent that children moving into the low-poverty neighborhoods get targeted more by police, the results probably understate the impacts of moving to these better neighborhoods.

What about the impacts? Again, only half of the families offered the chance to move to a low-poverty neighborhood actually did move. These results compare the entire set of families that were offered the chance to move to the entire set of control families. This design is called the intent to treat impacts. In setting up a program like this, one is not likely to have a 100% take-up rate. It is more likely to be the 50% that was observed in our experiment. Therefore, these results better approximate the results one might expect from a policy. A policy is set in place and an opportunity is offered to families; some will take the offer and some will not.

There was a dramatic reduction in violent crime arrests for adolescents in the experimental group compared to the control group. Crime data on the number of arrests per 100 teens for a 3-year period show that, on average, among boys in the control group, there were 61 arrests per 100 teens for violent crime, a strikingly high number. Meanwhile, in the experimental group, there were 42.1 fewer arrests, a dramatic reduction. A more modest and insignificant reduction for violent crime arrests was found for girls. On the other hand, there was an increase in property crime arrests for the experimental group. It was an insignificant increase for girls, but a substantial and significant increase for boys. Thus violent crime arrests for teens in the experimental group declined dramatically, while property crime arrests increased somewhat. In looking at the 3-year period, there is an immediate reduction in violent crime arrests that continues throughout the 3 years. Meanwhile, with the property crime arrests, there is an initial increase, but then it fades back in years 2 and 3. It may be that the property crime arrests were transitory, but there is a mixed story coming out of the arrest data.

There are two different stories about what kind of families move: the positive selection story and the negative selection story. Both the Baltimore and the Boston sites find evidence of the negative selection story—that is, families with children who are starting to get in trouble are most likely to move. In the Baltimore data, we looked at preprogram arrests and compared them for those families in the experimental group that did move to preprogram arrests for those families in the experimental group that did not move. We found that there were significantly more violent crime arrests and significantly more property crime arrests for the families that did move compared to the families that did not. It is a negative selection story. This is important because it implies that the nonexperimental studies may be underestimating the importance of neighborhood effects.

We also have findings on somewhat younger children. In the Boston site, they administered a questionnaire to families and obtained a 96% response rate. It was mostly mother-report data through a standardized behavior problem assessment. Mothers reported that they were interested in getting away from the violence. They said that they were worried about their children and their children's health. They also said that they were worried about their own health—their own mental health.

Since this design is intention to treat, we compared the entire set of Boston families offered the chance to move to low-poverty neighborhoods, the experimental group, with the entire set of control families. In looking at behavior problems, there were seven items about whether the child had trouble getting along with teachers, was disobedient at home or at school, was hanging around with troublemakers, and so forth. It is a subset of items from the standardized externalizing behavior problems score. At baseline, these children ranged from age 3 to 13. At this time the sample is not large enough to break the children down into smaller age groups, but we will be able to do that with the 5-year follow-up.

We found a large gender difference, with control group mothers indicating that the boys, on average, had behavior problems on about a third of these seven items and the girls only about a fifth. On average, the experimental group had about a fourth to a third less behavior problems than the control group. Again, the experimental group includes the entire set of families that was offered the chance to move. The implied effect on the families that actually did move would be about twice that high. There was no significant impact on behavior problems for the girls. For asthma attacks requiring medical treatment, the mean was about 10%, which was reduced to half among the families that were offered the chance. Again, for the families that did move, asthma attacks were all but eliminated.

Another interesting finding was asking, at the time of the 3-year follow-up, whether the children had one or more close friends in the neighborhood. The boys in the families that were offered the chance to move to the low-poverty neighborhoods were just as likely to have one or more close friends after the move as before. The girls, however, had more trouble establishing friendships in the new neighborhoods.

There are dramatic results for neighborhood conditions, as would be expected. For example, families were asked how often they heard gunfire in the neighborhood. About 20% of the control group said they heard gunfire frequently, which is reduced by half in the experimental group, which would be expected since they have moved into much safer neighborhoods.

There are some remarkable results on mothers' health as well. A general health question showed significant improvement for the mothers in the experimental group relative to the control group. Aspects of mental health for the mothers also improved. A depression scale with differences was borderline significant, indicating about a 30% reduction in depression among mothers in the experimental group.

Overall, the data show fairly dramatic improvements both for children, especially the boys, in terms of behavior problems and criminal activity, as shown in the Baltimore site, and for mothers' mental health, as shown in the Boston site. In summary, above all, because this is a randomized experiment, these results show convincingly that child outcomes do improve with moves to lower poverty neighborhoods. The mechanisms are not clear in this research because the program is changing many things at the same time. Thus, we cannot tell if it is the schools or the reduction in violence and so forth. Finally, while these results seem to show that a dramatic change in neighborhood conditions—going from a 60% poverty rate to a 10% poverty rate—can have great impacts on children, it is unclear to what extent it generalizes to neighborhood impacts for families at other parts of the SES spectrum. However, for this important subset of families living in high-poverty neighborhoods, there are striking effects.

AUDIENCE QUESTIONS AND COMMENTS

Question: Did the Boston project identify the reasons for those families who were selected to move but who chose not to? There was such a high percentage that did not move as compared to those who were given Section 8 vouchers without the counseling.

Duncan: In all the sites, the take-up rate for the experimental group families was about 50%. It was a bit less than that in Boston. It is a good question, but I do not know the answer. It is a dramatic move. They did not have the control over where they went in the same way that the Section 8 families did. They would be moving to a much different neighborhood than a Section 8 neighborhood is likely to be. It would be a much Whiter neighborhood. It is difficult to take that huge step into such a different neighborhood, especially when one's friends and relatives are in the old neighborhood.

Question: What is the impact of the ethnographic movement on the development of developmental screenings, if any?

Jarrett: In terms of measurement, that might be a question for those of you who are involved in Head Start to let us know if you are able to use the kind of research we are doing. It points to a larger issue of being able to tap the kind of competencies that children have. For example, many of the standardized measures tap only conventional kinds of behaviors. This kind of research tells us that these children are bright and have many competencies. However, there may be a real mismatch between the kinds of behavior that we value in conventional settings.

Let me also add that I did work with the Casey Foundation last year to put together a report, which was an overview of the findings that ethnographic work tells us about neighborhoods and families. They have been using this work to help them design their neighborhood transformation initiative. Thus, we do have opportunities for researchers, policy makers, and practitioners to take advantage of the kind of work that we do.

Health

Health Status Among Former Head Start Children and Its Effects on School Achievement: A Look at Interactions and Outcomes on a Local and National Level

CHAIR: Abbie Raikes
DISCUSSANTS: Rutha Weatherl, Robin Brocato, John Love
PRESENTERS: Martha M. Phillips, Helen H. Raikes, Abbie Raikes

An assumption that child health determines life quality and opportunities for school achievement underlies Head Start efforts. The concern about the health of children is well placed given the well-documented relationship between poverty and lack of access to health care, which in turn affects health status (Newacheck, Hughes, & Stoddard, 1996). This symposium addressed the relationships between the health of low-income children and school achievement and the relationship of health to a number of factors, such as parental health, depression, and region of residence.

The kindergarten and 3rd grade health status of former Head Start children among 256 Nebraska Head Start/Public School Transition students and 5,617 children from 28 sites included in a national sample were examined. This session approached the question of the relationship between health and achievement in a complementary manner. Strong relationships and highly significant associations between teacher ratings of health and child achievement in kindergarten and third grade were identified. Both academic achievement scores and behavior and social skills scores were found to be related to health ratings in both the kindergarten and 3rd grade. The relationship of parent and teacher ratings to one another and the differences in the predictive power of teacher and parent ratings were discussed. In addition, possible explanations for how health could affect school achievement were discussed.

The discussants—Rutha Weatherl, Transition Director at the Nebraska site, Robin Brocato, Assistant to the Director of Head Start Health Services, and John Love, Senior Research Fellow at Mathematica Policy Research—provided commentary regarding Head Start's potential and challenges for moving children towards good health and for helping parents and programs support child health as children mature. Discussants explored ways that programs and policies can target improved health utilizing multiple strategies.

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Health Status and Academic Achievement: A National Perspective

Martha M. Phillips

The relationships among health status and indicators of academic achievement were investigated using information obtained from a national sample of former Head Start participants. Data were obtained from a group of 3,224 children who, along with their families and teachers, participated in the control arm of the National Transition Demonstration Study, a multisite longitudinal study completed at 31 sites across the country between 1992 and 1997. Three types of data—demographic data, health status and health history data, and academic achievement data—were obtained in both kindergarten and 3rd grade from parents, teachers, and children. The hypothesis was that health status would be directly associated with academic and social outcomes in school. Linear regression analyses were completed, with language, reading, math, and social skills scores entered into models as dependent variables and demographic and health status indicators entered as independent variables.

Multiple indicators of health status were available at both time points (from both teachers and parents) including: (a) general ratings of health status; (b) indications of concern about health, safety, and hygiene; (c) perceptions of the child as well rested; and (d) recognition of a health condition interfering with general activity and/or school attendance. In addition, data for three parent health variables (overall health status, depression, and chronic health condition interfering with child care activities) were available at both time points.

A series of univariable and multivariable linear regression models were constructed to assess the ability of the child and parent health variables, singly and in combinations, to predict each of the eight academic and social outcomes (four each in kindergarten and third grade). In addition, key covariates—family income, parental education, early language skills, special education status, child gender, and whether or not the parent read to the child on a regular basis—were included in final multivariable models. A *p*-value of less than 0.01 was required for significance.

Overall, results indicated that child health status was associated with academic and social outcomes in kindergarten and 3rd grade. However, the associations were not always independent of other factors. Special education status, parental education, early language skills, and income were the most powerful predictors of academic and social outcomes in both kindergarten and 3rd grade. After those predictors, teacher ratings of child health show the strongest predictive ability. These predictive associations were strongest in kindergarten. Teacher ratings were most consistently important in predicting social skills outcomes and less powerful in predicting academic outcomes.

The Impact of Health on School-Related Outcomes Among Head Start Transition Children in Nebraska

Helen H. Raikes, Abbie Raikes

While Head Start emphasizes health services for both parents and children, there are relatively few studies that follow up on the health status of children who have been in Head Start. More specifically, there are few studies that examine the academic trajectories and other correlates related to health status for low-income children in the early elementary years—kindergarten through 3rd grade. The sample of the current study consisted of 262 former Head Start children (N=101) and their classmates (N=161) and families within the Head Start/Public School Transition sample in Lincoln, Nebraska. This presentation addressed two main questions: (1) What was the health status of former Head Start children and classmates attending schools serving mostly low-income children? and (2) What was the relation between health status and child academic outcomes?

Overall, from ratings of children's health status completed by parents and teachers, former Head Start children were considered to have fairly good health in both kindergarten and third grade. Former Head Start parents rated their children's health as better than children's teachers did, although the differences were not significant. Teachers were more likely than parents to report that health interfered with school attendance (4.1% vs. 3.4%), while they were less likely to report that health interfered with activity (2.8% vs. 5.7%). When considering both teacher and parent ratings, in addition to other health variables, children's health remained relatively constant between kindergarten and 3rd grade (r=.325, p<.001).

Notably, regression analyses revealed strong and enduring relationships between child health status, as rated by teachers and parents, and many academic outcomes in both kindergarten and 3rd grade. Health ratings in children were strongly predictive of academic achievement as measured by language test scores in kindergarten (p<.0001), kindergarten (p<.0001) and 3rd grade (p<.0001) reading scores, and kindergarten (p<.0001) and 3rd grade (p<.06) mathematics scores. Also of importance was the power of poor health status ratings by teachers to predict the presence of behavior problems in general (p<.0001), internalizing (p<.0001) and externalizing (p<.071) behavior problems, and hyperactivity (p<.007) in 3rd grade. Health status as rated by teachers also predicted social skills ratings in kindergarten (p<.0001).

Further, numerous interesting relationships were discovered when examining the relationship of reported child health status to individual, family, and community variables. In particular, self-reported parent health predicted language (p<.002), reading (p<.03), math (p<.003), and social skills (p<.007) scores in kindergarten. The relationships were not as strong when children were in 3rd grade. Other predictors included (in order of predictive power) child enrollment in special education, gender, income, parent education level, parent reading to the child at home, the presence of the father in the home, absenteeism, and child involvement in the Head Start transition program.

In conclusion, teacher ratings of child health are good predictors of children's academic achievement in both kindergarten and 3rd grade, parent health and child health are both important predictors of school achievement, and health is an especially strong predictor of social skills in kindergarten and 3rd grade. Accordingly, a long-term, integrated approach to health, which focuses on parent health as well as child health, is necessary for effective prevention of negative academic achievement outcomes due to poor health.

Early Findings from the Healthy Steps for Young Children Program

CHAIR: Kathryn T. McLearn
DISCUSSANT: Kathryn E. Barnard
PRESENTERS: Kathryn T. McLearn, Cynthia Minkovitz

The Healthy Steps for Young Children (HS) program, an initiative of the Commonwealth Fund, seeks to enhance the development potential of young children (birth to 3 years of age) and to strengthen the involvement of parents in their children's early development by orienting the practice of pediatrics to emphasize child development and parenting competence. The Healthy Steps program has implemented and is evaluating a new model of pediatric practice designed to achieve this goal. A significant component of this model is the inclusion in primary pediatric care of a new health care professional with a focus on child development, the Healthy Steps Specialist (HSS).

The first paper describes the rationale behind the Healthy Steps program and its major features. The second paper provides an overview of the evaluation and reports early program findings at 2-4 months.

■ The Healthy Steps for Young Children Program

Kathryn T. McLearn, Barry Zuckerman, Margot Kaplan-Sanoff, Steven Parker, Michele Yellowitz

The Healthy Steps for Young Children Program is a national initiative developed by pediatricians from Boston University in collaboration with professionals from the Commonwealth Fund. The program was launched in 1994 and has since partnered with close to 70 funders. Currently, there are 15 national evaluation sites and 9 affiliate sites at which nearly 4,500 families receive services.

The program responds to several important realities of modern American life, including new research on early brain development. Evidence is accumulating that early experiences and relationships, especially in the first 3 years of life, are crucial to the development of the brain. The Healthy Steps program, developed for children of this age, is intended to enhance the developmental potential of children based on the premise that a whole child-whole family approach can effectively be accomplished through the health care system. Within pediatric primary care, parents and children receive developmentally oriented services that emphasize the physical, emotional, and intellectual growth and development of young children. The purpose and design of the program is to respond to what parents say they want and feel they have not gotten from the health system, particularly guidance on behavioral issues.

The Healthy Steps approach has three underlying premises: (a) the first 3 years are critical for both the child and family, (b) relationships between parents and children are key to healthy growth and development, and (c) an expanded approach to pediatric care that centers on the child's health and that strengthens relationships is needed.

The initiative calls for a new member to be added to the pediatric teams—the Healthy Steps Specialist, a nurse, child development expert, or social worker who has special training in child development and who becomes the families' primary resource. The Healthy Steps Specialist, in conjunction with the Healthy Steps physician, provides the following services:

1. Enhanced Well Child Care designed to answer questions that parents may have about their child's upcoming developmental stages. It also includes administering physical and

developmental check-ups and using "teachable moments," which enable pediatricians and Healthy Steps Specialists to draw on observations of children and parents to communicate information about behavior and temperament. Early literacy activities also are provided as part of the Reach Out and Read program;

2. A sequence of Home Visits by Healthy Steps Specialists that reach families in an environment where parents may feel more comfortable voicing concerns;
3. A Child Development Telephone Information Line that is available for parents to call Healthy Steps Specialists with child development or behavior issues;
4. Child Development and Family Health Check-Ups starting at 6 months that detect developmental or behavioral problems, provide "teachable moments," and identify family health risks that might adversely affect the child's health and development;
5. Written Materials for parents that emphasize prevention and promote healthy child development;
6. Parent Groups facilitated by Healthy Steps Specialists at office sites to interweave information and support; and
7. Linkages to Community Resources that are provided both in the form of binders of community resources and parent-to-parent bulletin boards.

The Boston University School of Medicine trains pediatric clinicians and Healthy Steps Specialists to use the Healthy Steps components to successfully transform practices into an interdisciplinary approach. The training includes interactive strategies and case-based problem solving. After the training, Healthy Steps Specialists participate in biweekly technical assistance calls with the Boston team.

■ Receipt of Child Development Services and Satisfaction with Pediatric Care: Effects of the Healthy Steps for Young Children Program at 2 to 4 Months

Cynthia Minkovitz, Donna Strobino, Daniel Scharfstein, Janice L. Genevro,
Nancy Hughart, Mary I. Benedict, Bernard Guyer

The Healthy Steps Program (HS) relies on a pediatric clinician-child development specialist partnership to enhance developmental services (McLearn, Zuckerman, Parker, Yellowitz, & Kaplan-Sanoff, 1998). Pediatricians historically focus only a small proportion of well baby visits on behavior or development (Foye, Chamberlin, & Charney, 1977; Reisinger & Bires, 1980; Osborn & Reiff, 1983). Findings from the recent Future of Pediatric Education II Project suggest that optimal child care in the 21st century will require more emphasis on prevention and that child health professionals, such as developmental specialists, may play a greater role in direct patient contact in order to meet the needs of children and families (Anonymous, 2000).

An evaluation of HS is being conducted at 15 sites across the country (Guyer, Hughart, Strobino, Jones, Scharfstein, & the Healthy Steps Evaluation Team, 2000). At each of six randomization design (RND) sites, approximately 400 children have been assigned randomly to intervention and control groups of 200 children each. At nine quasi-experimental design (QE) sites, an intervention practice and a similar comparison location have been selected and up to 200 children are being followed at each site. Children in the control group receive routine pediatric care but have no exposure to the HS Specialist or to HS materials.

The evaluation will assess whether HS leads to specific changes in parents' knowledge, beliefs, and practices and in improved child outcomes. To determine whether some of these desired outcomes were being achieved in the early stages of the program, when children were 2-4 months old, interviews with mothers were conducted for 2,631 intervention and 2,265 control subjects (89% and 87% response rates respectively).

Analyses were conducted separately for RND and QE sites and adjusted for baseline differences between intervention and control groups. Hierarchical linear models were used to obtain overall unadjusted and adjusted effects of HS while accounting for within-site correlation of outcomes.

By the time their infants reached 2-4 months of age, intervention parents were considerably more likely than control parents to report receiving five or more HS services, receiving home visits, and discussing five topics related to infant development with Healthy Steps Specialists. They also were more likely to identify someone at the practice going out of their way to help them and less likely to be dissatisfied with help or listening from the doctor or nurse practitioner. Moreover, intervention mothers were less likely to place their newborns in the prone sleep position, which has been recommended against by the American Academy of Pediatrics and shown to place vulnerable infants at risk for sudden infant death syndrome (SIDS). The program did not affect continuation of breast-feeding once adjustment was made for baseline differences at QE sites. Differences in the percentage of parents who showed picture books to the young infants were found only at the QE sites and may reflect factors unrelated to HS.

Intervention families received more developmental services in the first 2-4 months of life and were happier with care received than were control families. Future surveys will determine whether these findings persist and translate into improved language development, better utilization of well child care, and cost effects.

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Child Safety: Teaching While We Care

CHAIR/DISCUSSANT: John Pascoe
PRESENTERS: James Poole, Cheryl Neverman, Donald Palmer

John Pascoe: This symposium is on child safety and is being sponsored by the American Academy of Pediatrics (AAP). I am a pediatrician in Madison, Wisconsin, and a professor of medicine at the University of Wisconsin. Our presenters include Cheryl Neverman, manager of Children's Safety Programs at the National Highway Traffic Safety Administration (NHTSA), which is a division of the Department of Transportation. She serves as a liaison to the AAP Committee on Injury and Poison Prevention and has developed the new standardized child passenger safety technical curriculum, a required course for instructing new child passenger safety training for child care providers entitled, "Moving Kids Safely." James Poole is a practicing pediatrician from North Carolina and a member of the AAP committee on Early Childhood, Adoption, and Dependent Care, the Advisory Committee, as well as AAP's child care activities, including Healthy Child Care America and the National Training Institute for Child Care. He also serves as a consultant for local and national child care programs. Donald Palmer is a retired private practicing pediatrician, active member of AAP and past president of the Alabama chapter of AAP. He is also a member of the Committee on Early Childhood, Adoption, and Dependent Care and participates as a member on the Tribal Child Care Standards Advisory Committee.

James Poole: Four years ago, one could count on one hand the pediatricians that were actively involved with child care. The Healthy Child Care America campaign started in Washington, DC with Donna Shalala and the Department of Health and Human Services designing and developing it. Then, it sat on the shelf, and they did not know what to do with it. In North Carolina, we took it and combined it with state government, child care providers, health consultants, and the pediatric society.

People are starting to realize the importance of early brain development. The Carnegie Institute came out with a study reporting that it is important for children aged 0 to 3 to have good quality child care because a lot of things happen to them in the first 3 years of life. These new developments, more than anything else, have allowed federal, state, and local government people to say now we have to get interested in child care and all the things that happen to children early on.

I gave a talk once at the National Association for the Education of Young Children (NAEYC) National Conference. There were 400-500 people in the audience. The discussion had been that child care providers are the primary caregiver, an idea that was just starting to come across. In the midst of this discussion, I was ready to get up on the podium and say to the child care providers, "Heck no, you're not the primary caregivers. As a pediatrician, I am the primary care provider." As I was getting up to walk to the podium, I looked over in the corner and saw a mother holding a child. Immediately, I realized my fault and was glad I had not said anything. I realized that the primary caregiver is the parent. No matter who, what, when, or where and no matter how good, bad, or indifferent they are, parents are the primary caregivers for their children. Our job is to supplement that and nothing more. We may help out, but that is not our child. We have to understand that first and foremost.

All behavioral development has to do with the brain. Brain development is dependent upon both experience and genetics. I believe environment plays a huge role in early brain development. The brain has a great deal of plasticity and can recover over time. This means that the brain does compensate for what is going on. We certainly have the ability to help children that might be in bad situations, but we should help early on. One of the top behavioral developmental pediatricians in the country says that a child's self-worth and perception of whether the world has any opportunity or not is set in stone by age 5.

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We can work for change, but we cannot change everything. We hear parents yelling at their children in the stores, saying, "No, you cannot have that. No, you cannot have that." It is not that the discipline is wrong. Maybe that child cannot have that item at that moment, but it is the tone the parent uses that can be damaging.

The brain has four areas: (a) the stem, (b) the diencephalon, (c) the limbic system, and (d) the cortex. These areas have lots of pathways for accomplishing different things. A 4-month-old child functions by using brain stem alone. The brain stem is where things start developing. We know that children, at 2 months of age, can determine their own mothers' voices and smells and even begin to have preferences for colors. Stimulation is great. I do not believe in putting children in front of the television to stimulate their color sense, but they should certainly be stimulated with all types of other activities and objects.

Basically, the brain starts off with all types of neurons, with millions and millions of brain cells. Then, we start losing them, even by our 20s and 30s. This is why we need to stimulate brain cell and neuronal development at the earliest age possible. Increasing experience defines the wiring of an infant's brain. Eighty percent of the connections are already made by age 3. This just underscores the importance of these early ages. This is really what we are after.

During the first 10 years of life, the brain is at least twice as active as that of adult brains. The brain uses 60% of nutrition during the first year of life. This decreases to 30% by age 3. That is why 3- and 4-year-olds can get on a computer and start working quickly, but it may take us about 3 weeks to learn how to do what that child learned in just a few minutes. That is one of the difficulties with computers and computer learning right now. We can teach the children, but the trouble is teaching the school teachers. Our ability to learn is, unfortunately, limited by our synapses. I blame it on synapses and not on a deficit in my educational level.

The way that parents and caregivers relate to children is important. Providing quality care is important. The child care environment is a positive place to learn. I am a consultant to many child care corporations and centers. Six out of 10 children are in child care. Approximately 84% of all 5-year-olds are in some sort of child care. These numbers make parents panic. Even though they may not believe in child care, parents think they had better get their children into child care in order to begin their education at an early age.

Parents often ask me, "What makes my child successful in kindergarten?" It is not about knowing the ABCs, colors, or a foreign language, rather what is important is having understanding, love, and relationships and so forth.

We will talk about transportation and the first years of live, but I wanted to give an initial introduction into the development of children and how can we use transportation. No matter where a child is, be it at home, at school, or on a field trip, it is an important time for children to learn. One would be surprised at what school bus drivers are listening to, for example. This is what the children are listening to, as well, and what they are learning from.

Cheryl Neverman: We are only at the tip of the iceberg in getting the word out to child care providers, Head Start consultants, educators, and whoever else needs to be concerned with transportation safety issues. This is something that we have been working on for the past several years at the Department of Transportation, which partially funded the Healthy Child Care America program through the AAP in conjunction with the Child Care Bureau and the Maternal and Child Health Bureau. Part of our process has been working with national organizations, such as NAEYC and others, to find a way to reach out to those who are providing education to the providers and to the providers themselves. We are talking about the increasing risk of liability that they are facing.

When the national guidelines came out for out-of-home child care, there was only a short paragraph on transportation. Since then, we have made some major changes to that. However, we have a lot more to do to in explaining to child care providers that they are the ones who often are either providing transportation to and from the center, the site, or the school or providing transportation to an enhanced educational opportunity.

When we talk about opportunities to influence early childhood brain development, we are careful not to increase a program staff's feelings of risk, which could lead them to put limits on their transportation because they are afraid of doing something that might put them at risk of liability. In fact, we want to encourage and enhance those opportunities with our programs.

We recognize that field trips to zoos and museums and other similar opportunities are appropriate for children. However, they are only appropriate if they are done safely. The transportation that is provided for children to take these types of field trips is important. We have been working at the national level with our federal partners to make sure that transportation through the Head Start regulatory action is also something that falls under strict guidelines.

We are concerned about violence and other injuries to children, but motor vehicle crashes remain the number one killer of young people. Child safety seats, seat belts, and other occupant protection devices have a statistically proven track record of providing the necessary protection for these children. Unfortunately, people do not know how to use them. Some 80 to 90% of child seats are installed incorrectly. We need to deal with this issue. One should not have to be rocket scientists to install a child seat. One only needs to understand the issue and the importance of the issue. Then, one needs to understand the technical issues surrounding it.

Protecting children and reducing liability are the main issues. Liability is an extreme risk. We have had an increasing number of cases of parents suing providers, hospitals, medical personnel, and others who they feel should be providing them with either adequate information or with adequately safe transportation. When parents place their children in the hands of another to care for them during the day, parents expect the child care provider to care for their child as safely as they would as parents. They expect at least the same amount of respect to safety as they would have as parents.

The Committee on Injury and Poison Prevention developed some policies through the American Academy of Pediatrics. The first and most important policy is that children should face rear until at least 1 year of age and at least 20 pounds. This is one of our basic tenets; we need to have children in a protective rear-facing position for as long as possible. It could be that the child will reach the weight limit for the infant seat long before he or she reaches the age of 1 year. We used to say that as soon as a child could sit up by his- or herself, he or she could sit in the forward-facing position. Now, we know better. From the information that we have from injuries caused by the snapping forward of the head in a forward-facing position, we know that it is best to keep the child in the rear-facing position for as long as possible.

One can imagine a child held in by harness straps and the incredible force in a crash. That image is something that most people do not understand. They do not understand the amount of force and energy in a crash. We try to teach that to parents. We try to show parents examples of crashes that have happened, even at low speeds.

I have a sad story about how important it is to give everyone the right information. A 9-month-old infant died because his parents were given conflicting bits of information on how to transport infants in the car. The NHTSA told the child's mother to keep the baby in the rear-facing position until his first birthday. However, the pediatrician told the child's father to have him face forward because he weighed more than 20 pounds. When this family was involved in a low-speed collision, everyone but the infant involved walked away with no injuries. The infant died because the father was misinformed by a misinformed pediatrician about how to properly place the infant in the car seat.

This story shows that it is absolutely essential to understand how to install a child seat and to understand some of the most basic rules of child transportation. It is also crucial to inform not only the parents, but the pediatricians and any other child care providers, as well.

We have a huge educational campaign now about booster seats. Based on our crash statistics and some observational surveys, we see that only about six percent of children who are in the weight and size range that does not fit in an adult belt are actually in a booster seat. Most people do not even understand what a booster seat is or what it is used for. We are trying to change the behavior of parents and their children up to about age 8. This is the age at which we think that child is about the average size of a child that may or may not fit correctly in an adult belt. It has nothing to do with age, but rather has everything to do with their sitting height. That change in behavior is a major social change in this country. Having parents, child care providers, and everybody else understand the need for change and making that change happen and be effective will be difficult.

We have a training program for child care providers that we developed through our relationship with the AAP Healthy Child Care America campaign. It is our standardized child passenger safety training. It is a 4-day course. We did not expect a lot of child care providers to go through it. Almost 6,000 people in this country have gone through the course in the last 2 years, which is an amazing number. We started out with a small group of about 100 people throughout the country who had this level of training. We have managed to change the face of America. We have changed the infrastructure in this country to provide many technicians at the community level across the country and can put everyone in touch with those people.

We have another program that is more important for child care providers, Head Start providers, and those dealing with any out-of-home situation. This new curriculum is called Moving Kids Safely In Child Care. It is a 12-hour curriculum providing information about the liability for the provider and basic installation of child seats. The curriculum teaches how child seats work, why they work, and the basic rules about how to install them correctly. Then, the child care providers go on to the optional real world checkup event where they have the opportunity to see what we are talking about.

We have also developed a 2-hour self-learning module that anybody in a center or child care facility can take to become aware of the issue. The one thing we repeatedly state in the 12-hour training and in the 2-hour module is that they will leave knowing more than they did. That is the most important thing. There are too many people giving out advice, making decisions, placing children in child seats, and making policies for their centers without having adequate knowledge.

Donald Palmer: Almost half of the children who are 1-year-old are in child care. Two thirds or three fourths of 1- to 4-year-olds and almost four fifths of 5-year-olds are in child care. Six out of 10 children are in child care. These children are spending approximately one fourth of their lives in child care.

The Rameys and others produced a study called the Abecedarian Study in which they pointed out that a high-quality child care experience for an individual would have lasting effects for even as long as a quarter of a century. The effects have to do with financial status, emotional status, criminality, and employability. All these aspects carry forward for years. This makes us realize that the acquisition of child care and the assignment of child care becomes a lifelong determinant.

Next, we will talk about opportunity and opportunity at risk. Child care providers should not take this lightly. We have an opportunity as well as a burden. Initially, we have to consider skillful interpersonal relationships not only for the children, of course, but also for the parents with respect to the legal and regulatory mechanisms. The child care provider has to understand the parents' requests and the justification for them. The child care provider also has to do what she or he thinks is right. For example, whether or not to put a baby down in a sleeping position on the back or on the stomach. This has become a major issue, and yet we found that a lot of child care providers and parents are not doing this. Within the past several years, we found that if infants are put on their backs to sleep, we can reduce the apparent SIDS death by about 30%. Yet, we find that a lot of day care providers and parents are unaware of this. It is this type of interaction that we must engage in with parents and child care providers so that each can advise the other about safe practices and about where they are coming from.

Safe transportation practice is an opportunity that we have that is a shared responsibility with parents. The intake person should notice whether or not the child and the parent are adequately, appropriately, and safely buckled up. This is an opportunity for the provider to understand what the attitude of the parent is towards safe practices in transportation.

Agran and colleagues did a study a few years ago of fatal car crashes involving children and found that the greatest single determinant of whether or not the child was properly buckled up was whether or not the parent was properly buckled up. A parent who buckles up is three times more likely to buckle up his or her child. Therefore, it is the single most important determinant of safety in these crashes that can take children's lives. We should also remember that we teach through role modeling. It is important to do the things we say we should do, especially as children get older.

We have all sorts of opportunities for stimulating and accepting the responsibility for the rapid acquisition of neuronal maturation that these children have. We can accept this responsibility and help stimulate children's neuronal maturation during transportation as well as while the child is in day care.

Child care providers have the children during the period of most rapid development. One opportunity to keep stimulating those little minds as they acquire knowledge is during transportation. We should use this time in the car, bus, or van to stimulate children's minds. It is a good opportunity to play word, number, and color games, to tell stories, to sing songs, to ask questions, and to discuss different feelings. There are all sorts of ways that we can stimulate these children to think, feel, and interrelate while they are in a transportation situation.

In the Knoxville Head Start program, the drivers are all teachers. The teacher driving occupies herself driving and not teaching, of course, but she is there as a resource. The other teachers that are present keep the children stimulated all the time with games, singing songs, finishing sentences, and describing to each other how they feel about things.

Every child care program needs to have policies and procedures for transporting children. One of the publications that we like a lot is called "Model Child Care Health Policies." It is put out by the AAP, with a lot of help from the Pennsylvania chapter and Susan Aronson, in particular. It is a great program. The transportation program goes into not only the stipulations about vehicle safety and transit rules, but also specifically stipulates that caregivers will interact with children who are awake while traveling by telling stories, singing songs, playing games or talking about what the children see.

I have some copies of that transportation policy. To paraphrase a great slogan, "A mind is a terrible thing to waste." We all feel this strongly, especially since we have learned in the last few years how desperate and serious little children are about learning. Now, we need to accept the challenge.

Neverman: I would like to share some information about our testing and research program. There will be see some major changes in the next year within Head Start because right now the Department of Transportation and Head Start officials are working on new regulatory policies for transporting children to Head Start centers. It is most likely that every Head Start center will be required and mandated to use a vehicle that meets Federal Motor Vehicle Standard 222, which is used for school buses.

The NHTSA is the agency within the federal government that deals with vehicle regulations in terms of both research and public information education. We also act as an enforcement agency with respect to our regulations. For example, if Head Start puts regulations in place requiring that certain NHTSA standards are met, we would have to enforce those regulations. Manufacturers and retail sellers of vehicles that provide the transportation for these children would have to meet the NHTSA standards.

Head Start facilities may or may not use school buses, depending on where the Head Start facility is located within the community. If it is located in a school, it most likely uses school buses that are provided by the school district. If the facility is located in a community-based provider setting, it may be using other vehicles to transport children to and from the facility.

In terms of school buses, one of the most controversial issues is seat belts on school buses. We have been doing some extensive research including crash testing involving side impact, rollover, and frontal crashes, which we had not done with school buses before. Based on the results of these studies, we may be moving in the direction of recommending a three-point belt system instead of the lap belts currently used on school buses, although we will not know for sure until the final regulatory action comes out and is commented on by the public. Most likely, though, that will be the result of our research.

At the same time, I want to assure everybody again that school buses are, in fact, the safest form of transportation on the road. Statistically, over 10 years, the average number of children injured in a school bus related crash is 28 each year. The average number of children injured in the same age range and over the same period of time in vehicles other than school buses is 5,571. Thus, school buses are the safest transportation, having significantly lower fatality rates.

Many of the fatalities that occur in school bus accidents do not occur on the school bus itself, rather these fatalities occur outside the bus in the danger zone. Therefore, pedestrian safety is probably one of the best educational programs that we can provide for children who are going to be using a school bus. Pedestrian safety includes exiting or entering a school bus, walking in the peripheral area of the school bus, or getting to and from home or the classroom. Thus, pedestrian safety is a vital piece of information to be provided.

Federal standards mandate what kind of standards have to be met by vehicles used to carry school children. For example, a federal mandate prohibits dealers from selling new vans to be used as school buses, unless the vans meet the school bus standards.

Current occupant protection research involves the testing of different structures and analyzing the reports. We will not see any results from that until the end of this calendar year. We do encourage the use of our in-service safety series and provide information, educational programs, and curricula for school bus drivers. Once we have all the information for our new recommendations, it will be incorporated into the training for the licensed school bus drivers.

I strongly encourage everyone to understand what our agency does. Any defects related to vehicles can be reported to the agency, whether they are defects in the child seats, the vehicle belt systems, or anything else.

Some of the child restraint systems that are available on school buses today include the new latch system. This system was included even before we made any changes in the regulatory actions. This is a system that allows any child seat to be installed in a vehicle. It will be replacing existing child safety seat attachment systems over the next few years. This system will allow one to attach the seat to a special attachment point without using the vehicle safety belts, which makes them significantly easier and safer to use.

We have also had some systems developed for school buses. They are called "moms' seats." There are actually two companies that make some type of integrated seat system. One of these systems has a seat that folds out of the school bus seat. The other one has an attachment system similar to the latch system with a special vehicle seat that is installed on the school bus and holds a child safety seat in place.

A lot of education has to take place with these changes in regulations. There must be an increased awareness among providers so they know they are at an increased risk and need to provide those kinds of systems.

Currently, buses that are under 10,000 pounds do have seat belts on them, according to federal standards. They only have lap belts right now. Thus, all of these vehicles do have a belt system that can be used to install a child safety seat correctly.

We have a wonderful program called the Walkability Checklist, which assesses one's local pedestrian environment and allows one to make sure that the environment is safe for the child who is being brought to the school bus pickup or to the center.

We also have Guidelines For Safe Transportation of Preschool Age Children that is available as a booklet. It is important to understand that when one is talking about school buses, one is also talking about any other vehicle on the road. The important thing is to understand how to install a child safety seat correctly in the first place. Then, if one encounters a situation on a bus that is different or unique from a passenger vehicle, one has to understand what changes need to be made.

Understanding how to place people on school buses is also important. Adults should be closer to the aisles than children, who should be closer than infants, who may need to be in restraint systems. This way, nobody is falling over anybody else. This is something that people do not often think about, but that is important.

Understanding the limitations is also important. If we do in fact end up with three-point belt systems in the buses, then there will be a significant difference in the ability to provide appropriate belt positioning boosters on buses. We cannot do this now with only the lap belts.

These issues go back to the idea of meeting federal motor vehicle safety standards (FMVSS). FMVSS are located on the back of the child's safety seat. We have car seats that go through checkup events that previously had labels on them, but now the labels are missing dates or are missing all together. Sometimes we see brand-new seats or seats that are only 2 months old that do not have the labels because some parents like to scrub them off. We have to tell them that we cannot recommend a seat's safety anymore because the labels are missing, and, thus, we cannot tell anything about the seat. For example, we cannot tell if the seat is under recall, and there is no information that would be adequate to determine whether or not the seat is safe. Clearly, there are certain things that are important to understand. All of the necessary pieces of information are usually contained in the instructions located in the child safety seat instructions themselves or in the vehicle owner's manual. Unfortunately, school buses do not come with a vehicle owner's manual, so the school bus situation is a little different. Our interim standards, until something different comes up, is that one installs a child seat as safely on a school bus as one does anywhere else.

Easy-on Vest Company is a company that has produced special needs harnesses for a number of years. They have often been used for older children on buses who do not have the proper muscular skeletal control to sit up by themselves or take advantage of the passive protection that is normally seen on school buses. The company also will design a restraint system with a vest, which is like a harness system, to be used in a school bus setting. The only way it can currently be used without the belt system already on the bus is to use a special strap called a cam wrap, which wraps around, up, and over the top of the back of the seat and holds the harness in appropriately.

There is a specific system that is designed to hold that whole system in with the child. It can also hold a much larger child. It goes beyond the weight limits of most booster seats, which now go up to a maximum of 80 or 100 pounds. A lot of the special needs seats will provide better protection for children who are much older but still cannot use a conventional belt system in a bus.

Training will be required for everybody. Our initial training program, which will increase the awareness level of everybody in the center, will be important. In school buses, we talk about some specific things. The anchorage systems on a school bus seat need to meet special system requirements. These requirements prohibit the retrofitting of a school bus the way someone might retrofit an ordinary vehicle. If the floor of the bus is not designed to withstand the extreme forces that occur in a crash, then one cannot just install something in there. When ordering a new bus from the factory, which is what we always like to recommend, one does not do any retrofitting. Retrofitting is never as potentially safe as ordering a new system.

The establishment of a written plan is also important. We talk about doing individual educational plans (IEPs) for children. Oftentimes, the transportation people are left out of those. They need to be part of writing the IEPs because those children are often the ones who need some special attention with respect to transportation.

We have a training program that was started several years ago with the National Easter Seals Society that talks about selecting an appropriate seat for children with special needs. The AAP helped us develop that. We have a physician who is currently chairing the Injury and Poison Prevention Committee and is one of the best-known physicians in the country on this issue. We have developed training programs and put together a lot of good information that will provide adequate recommendations for pediatricians, occupational therapists, and physical therapists. These programs will enable them to make proper recommendations on mobility devices that would be appropriate for specific children and adequately protect them, whatever their needs may be.

Many times, children with special needs do not even need a special needs seat. Some special needs children may be adequately protected, at least during some period of their life, in a conventional child safety seat or in a conventional belt system. Others may need something different when they are younger or as they get older. For example, a premature baby may need a special device, but only when she or he is very young.

People must know the intricacies of this issue before giving any advice to parents. A person with little or no training should not even attempt to advise parents on their children's transportation safety needs. Often, parents do not even know that there are special systems available.

Another important issue to mention is the evacuation issue. There should always be an evacuation plan to get off a bus in case of a crash or a situation where the bus might be stalled on train tracks. Certain procedures and policies need to be in place.

There are always new developments in the field, such as the new latch system. The technologies change day by day. The important thing is to understand the issue itself, keep up with the technology as it comes out, and know that it is also important.

Poole: I would like to bring an issue to the table that is a little controversial and that is why do field trips for 3-year-olds in the first place? Does a 3-year-old know the difference between the playground in a child care center and a playground somewhere else? Are we inflicting potential harm on these children by taking them somewhere? Where in the world would a bus of 40 children in infant seats need to go? Is that a risk? I also am looking beyond the transportation issue and asking where are we taking these children and what happens once we are there? We need to ask ourselves why we are doing these activities in the first place and then what is a child going to gain that could be brought to the child.

AUDIENCE QUESTIONS AND COMMENTS

Question: Do you produce pamphlets for parents on the reasoning behind seat belt safety?

Neverman: We have a lot of educational materials that would be appropriate for parents. If the role modeling is what you are talking about, then absolutely. I would like to introduce a colleague, Gabriel Canoe, who is helping our agency look a little broader at the picture of cultural competency and the differences that exist.

Gabriel Cano: There is a series of pamphlets with child transportation safety tips. Those are being adapted into Spanish. We also have them in five or six other languages, but we are concentrating mainly on getting them right in Spanish because of the high influx of Latinos that we have. We have some other programs as well. One in particular called "Corazon de Mi Vida" is a child passenger safety program designed especially for Latinos. It was done in Spanish to begin with and was not just translated from English. There is even a kit with activities that are centered on Latino culture, such as child seat blessings.

Neverman: The transportation safety tips pamphlets are available in nine different languages. They were not just translated from English but were developed in actual communities so that they would be culturally and linguistically appropriate. All these materials from the Department of Transactions are free. A lot of them can be downloaded from the Web site. They still have to be ordered if someone needs them in the other languages. They are all done in black and white and are easily copied. They were initially developed for pediatricians to use in their offices and are age appropriate. They also cover school bus, pedestrian, and bicycle safety tips.

Question: How do I get information on child care health problems?

Poole: Go to www.aap.org and look up Healthy Child Care America, which contains all the materials on child care that the AAP has, including model child care health policies. There is also a big book called "Caring For Your Children," out of Home Guidelines. If one is involved with federal or state policy making, it is a bible worth having. One should also have the Child Care Health Policies and the Healthy Child Care America newsletter.

Pascoe: Are there other models out there of accessing local technicians who know about how to adequately restrain children in vehicles that people should be aware of?

Neverman: One can find a technician almost anywhere these days. We have so many different training programs going on. Some of them have been highly publicized because they are connected with companies like Daimler-Chrysler, which is training its dealerships and providing technicians at the dealership to help. Those people would be thrilled to get the publicity and the good will in the community for helping a child care facility or Head Start center.

General Motors is working with the National Safe Kids campaign, so wherever there is a National Safe Kids local affiliate coalition, there are certified technicians there who have gone through the 4-day training. They are the ones who can help with programs and teach the Moving Kids Safely in Child Care course.

On our web site there is a list of child passenger safety contacts in every state. There is also a listing by state of certified technicians who have released their name to the public so they can be contacted directly.

Comment: In our state, they put out little stickers to go on the back of child care seats.

Neverman: We no longer recommend the stickers because if one leaves the sticker on the seat and hands it down to another child, then that permanent sticker is still on the seat and the information is not accurate. We suggest putting identification information on a luggage tag type of removable identification tag. It is fastened to the back of the child's safety seat and is there for public safety information in the event of a crash. It also has a current picture of the child and should be updated every 6 months so it contains the most current information. It should also provide an adequate description of the child. It is a little more expensive, and the cost is one of the problems. However, we are finding that the program is replacing stickers. We have just taken it to a new level and improved the system significantly.

More than half of the people who have gone through the training are law enforcement officers. If people have other questions, they can contact their law enforcement officer, fire station, or hospital. Those are the three most likely places in the community where one is going to find someone who knows something about this issue or knows someone else in the community who has gone through the training.

We have focused a lot on those three groups, and now we are focusing on the fourth group of people who would benefit from our training programs—the child care providers. Child care providers are most likely to encounter the child in a crash situation, just as law enforcement officials, firefighters, or a nurse in the emergency room. The child care provider is the person who takes care of the child more hours than anyone.

Question: Have public health departments gotten involved?

Neverman: Yes, they have, but we have not been recruiting them to the extent that we have other people. We started with the public safety community before we went to other groups like the public health departments. People who are dealing with regulatory actions at the state level are also important because regulations are instituted at the state level.

The Impact of Culture on Health Beliefs and Behavior

CHAIR: John Pascoe
DISCUSSANT: Lee Pachter
PRESENTERS: Chou Thao, Mary Lou de Leon Siantz, Freida Ann McNeil

John Pascoe: Chou Thao is a medical interpreter at the Health Department, and serves the Southeast Asian community in Madison, WI. He screens and helps refugees find primary care providers, advocates for Medicaid services, and encourages Southeast Asian refugees to connect with the health care system in the U.S.

Chou Thao: I will discuss the history of the Hmong in America, their challenges related to health and social change. Hmong migration began from China to Laos in the Southeast Asian area from 1810 to the early 1900s. Beginning in 1976 the Hmong began migrating to the U.S. and other parts of the world as a result of the political conflict in Southeast Asia during the Vietnam War.

The global population of the Hmong is over 6 million people. In the Hmong culture, the family is a nurturing institution, which includes the extended family. Their family system is "elevated" or patriarchal. Their Hmong religion is Dab Qhuas, which translates to "Spirits Admiration". It is an animistic system that combines supernatural power, ancestral worship, superstition, and devil worship. The Hmong believe in life after death and reincarnation, especially in their ideas about of illness and death.

The social structure of the Hmong emphasizes the clan system, which originated from common ancestors, kinship, social, and political organizations. The social and the political are united in the clan system. The Hmong belong to his or her father's clan and remain members for life. In Hmong society, boys and girls are forbidden to date and intermarry within their own clan.

Hmong traditional beliefs regarding the cause of illness, and their descriptions of symptoms are very different from commonly used Western medical concepts. Western health practitioners may become confused, frustrated and may conclude that the Hmong patient is answering inappropriately by presenting a traditional belief in relating his or her symptoms. However, health practitioners can learn to correctly diagnose the patient's ultimate health concern and respond according to the patient's needs through an appropriately trained interpreter or a cultural broker. Common traditional Hmong concepts regarding causes of illness are as follows: food and drink, ancestor worshipers/animists, nature spirits, evil spirits, tamed evil spirits, lost souls, curses, weather, old age, expiration of visa/license, karma, house spirits, depression or stress.

Many illnesses, especially those which manifest themselves as stomach aches or digestive problems are thought to be caused by eating or drinking something that does not agree with the body. This does not necessarily mean that the food and drink was contaminated, rotten, or poisonous. This idea is not dissimilar from the symptoms caused by a Western "allergy." However, the Hmong perceive bad food and drink to cause different symptoms than do allergies in Western medicine. For example, a chronic feeling of bloating in the abdominal area may be described as " having a lump in the stomach," or "kem plab".

A common folk practice for differentiating between "bad food" and "bad drink" as the cause for a stomach ache is for a second party to massage the stomach of the sick person in a upwards motion towards the throat, and outwards along the arms to the fingers. A finger is then pricked and a drop of blood is allowed to drop into a bowl of water. If the blood floats, the illness is thought to be caused by drinking, and if it sinks then it is thought to be caused by food. Other symptoms believed to be caused by food and drink:

Hmong community leaders in the United States estimate that at least 70 % of Hmong refugees have chosen to retain their traditional beliefs. Ancestor Worshippers/Animists view most major illnesses as spiritual or traditional belief problems.

Each Hmong family has a group of ancestor spirits, which belong to the father's or husband's side. From time to time the ancestor spirits are in great need of certain things from the descendents' family to be used or spent in the spiritual world, causing illness in a member of the family. To make an appropriate diagnosis a shaman or diagnostician must be called in.

The Nature Spirits own and control their properties such as the hills, mountains, trees, rivers, caves, animals and its kingdom. In general, nature spirits are not malevolent towards humans. However, if a person offends, they may cause illness to the offender, the family members of the offender, or the immediate families.

Tossing a rock into the river may offend the river spirit. However, health usually returns to the sick person once an appropriate ritual is conducted. If an offense has transpired a Hmong Shaman, Diagnostician, and Tamed Good Spirit Master will be called in to make an appropriate diagnosis.

The evil spirits are believed to live everywhere, especially in uninhabited areas such as forests and jungles. If offended, they attack the perpetrator by causing him/her to have acute pain, violent pain, or sickness and death.

The powerful Hmong Shaman, Tamed Spirit Master, or Evil Spirit Master can deal with problems of this sort, and treatment usually entails fighting off the evil spirits, rather than appeasing it with ritual and sacrifice.

Throughout Southeast Asia there is a common belief that a person, by joining a religious cult or by studying under the established masters, can learn to control evil spirits. The only two tamed evil spirits are "Nyuj Ciab, and Zeb Ntais." They can be controlled under a specialty Master who are thought to be able to magically insert the "Nyuj Ciab, and Zeb Ntais" into anyone whom they target. People may also seek out and hire them to inflict sickness and death upon an enemy. Common symptoms of an attack by the evil spirits include: acute pain, violent pain, sickness and death. It is believed that the only way to escape from such a tamed evil spirit attack is to bribe the attacker with more money or hire a more powerful master to fight off the evil spirits.

A prevalent concept throughout many Southeast Asian cultures is that good health is the union of one's souls always with the body. The Hmong believe that each person has twelve souls - there are three major souls and nine shadow souls united in the body. The more souls lost and the longer they are lost, the sicker the person will be. The souls can be lost in numerable ways: being frightened, depression, trauma, being kidnapped by evil spirits, going on a long trip, or simply getting lost.

There are many different types of ceremonies to call the souls back to their bodies. Ceremonies range greatly in complexity from a basic calling ceremony to the most elaborate, enlisting specialty soul callers.

In the Hmong society it was believed that elders, particularly those of the same clan, had the right to curse their descendants if the descendants did not carry out the filial duties. A person who is morally right could curse anyone who has done him a serious wrong. Curses could cause a wide range of illness, economic disaster, and even death. The only way to remove these effects was for the person who originated the curse to take it back through appropriate ritual and ceremony.

Traditionally Hmong elders believe that chronic illness, old injuries, etc., will reoccur as various forms of pains or aches in the body when the weather changes suddenly. It is also believed that changing weather can bring on colds, influenza, and muscle aches which Western people might call arthritis or rheumatism. Heat exhaustion and sunstroke are also recognized by the Hmong as being caused by overexposure to the sun and heat.

Hmong understand that as the human body ages, it degenerates, and various ailments occur. Long-term hard work and having borne many children are often cited by the elderly as a cause for body aches and pains and respiratory and digestive problems. In Hmong culture and society old age begins at age 30. The lifespan was shorter than the American average. Being considered old in Hmong society was perceived as something desirable, even though illnesses were anticipated with advancing age.

The Hmong believe that each person receives or carries a visa or a license from God to be born as human being. God determines the length of stay on earth and the expiration date of the visa or license. Life-threatening illnesses and unexpected or unexplained sudden death are thought to be caused by that person's license or visa being expired. The Hmong Shaman is the only one who has the power to extend, renew, or restore the expiration date. For routine preventive care a shaman is called in to: perform ritual of trance or incantation, make negotiations to extend or renew the visa or license, offer animal sacrifices, support and restore supplies and goods by the couple of the younger brothers, daughter, and son in-law, son and daughter in-law at a ritual ceremony.

There are six house spirits who play an important role in the house in guarding the individual person's souls and spirits and fending off any outside spirits. The spirits of the ritual hearth or large stove and the spirit of the cooking hearth, which is in the middle of the floor, help to protect every member of the entire family from harm or misfortune. The spirits of the ancestors live in the central pillar and protect everyone in the household against devils. The spirit of the door helps to protect the house and everyone's souls in the entire family against devils. The spirit of wealth and prosperity lives against the middle of the back wall and protects the entire household and every member of the family. The spirit of the marital bedroom lives in a gourd in the bedroom and the gourd needs to be kept clean, to protect and produce the animal of the family.

The concept of Karma is a common belief throughout Asia. Karma is not directly a part of Animism or Ancestor Worship. The Hmong believe that souls return to earth time after time, and life on earth is designated by luck, and by karma. Thus, people born with birth defects, mental retardation, handicaps, and chronic illnesses are often regarded as paying for sins committed in past lives.

Depression or stress is not perceived by the Hmong in the same way that Westerners perceive it. However, they recognize that stressful situations can result in various health problems, especially that which we in the West call mental illness. Some examples include family financial problems, aggressiveness, depression, insomnia, sadness, and loss of appetite. The Hmong refer to those who exhibit changes in personality as "having something wrong with their liver." This does not mean that they think there is something pathologically wrong with his or her liver; rather, the Hmong language uses "liver" as a term to describe anyone exhibiting various sets of symptoms. For example, a common Hmong term for someone who becomes destructive and begins to verbally abuse others after some kind of emotional trauma or loss is "siab phem, tsiv siab, kho siab" which translated having an "ugly liver, angry liver, rigid liver".

Education is the most important driving force in the development of the Hmong community in the United States. In the short period of 25 years (1975-2000) of their residence in the U.S., more than 5,000 Hmong students have earned bachelor's degrees, more than 500 master's degrees and 104 doctorate degrees at American colleges and universities. This is tremendous progress when one considers that in 1939 there were only nine Hmong students in elementary schools in the whole nation of Laos.

Western health practitioners may wonder why they lack credibility with some of their Hmong clients. Part of the reason is that differences between Western and Hmong health practitioners are so great that some Hmong clients wonder if the American doctor or nurse is competent. Hmong traditional healers provide health care to their patients in a completely different and unique way, and just as Western countries have different types of healers, the Hmong also have healers from different schools of practice. It is quite common for individuals to study and master more than one healing art. Although being a traditional healer does not usually bring a person wealth in Hmong society, it does bring status and peer admiration. Common Hmong traditional healers and practitioners are: Hmong shaman, herbal practitioners, Tamed Good Spirit Master, acupuncturist (also uses coining and cupping), masseuse, diagnostician, Soul Callers, Tamed Evil-Spirit Master.

The Hmong shaman is the most commonly known traditional healer, existing for many thousands of years. The shaman can be either male or female and shamanism is the only Hmong traditional healing art that cannot be studied or passed on to another. The healing spirits call "Dab Neeb" chooses their host by causing prolonged illnesses such as intolerable foods, fatigue, weakness, etc. The shaman master is able to store the appropriate and good spirits, "Dab Neeb," to the individual to teach him or her how to heal others through incantation with the spirit world. Each shaman is thought to have a different level of healing powers and some specialize in certain fields of illness. However, Hmong shamans are capable of dealing with almost any kind of sickness. Moreover, they are able to diagnose and refer patients to other sources if they are unable to cure the patients.

Tamed Good Spirits Masters (Txiv Khawv Koob) are the counterparts of the Tamed Evil Spirit Masters. They are thought to have similar powers in removing foreign objects from the body that cause illness, stopping blood flow from a fresh cut or wound or nose bleeding, healing broken bones, fire burn, speeding up labor and delivery, and removing various aches and pains. However, they do not have the power to fight off attacks by Tamed Evil Spirits, to insert foreign objects into victims, nor do they possess the power to cause illness in others with the spirits. The Tamed Good Spirit Masters have only the power to cure and, consequently, are better accepted in Hmong society.

Tamed Evil Spirit Masters (Txiv Khawv Koob) are thought to be capable of causing illness as well as curing those under attack by another Tamed Evil Spirit Master. This type of healer also has the added skill of being able to magically insert or remove foreign objects from a person's body. The foreign objects cause various types of acute pains and illnesses and eventually death. The Tamed Evil Spirit Masters are viewed with fear by the Hmong society, so they keep their skills a secret.

There are several types of Hmong diagnosticians who are capable of diagnosing what is wrong. They will refer to other healers for cures, but will not themselves provide cures for clients. They have learned the art of fortune telling; reading various omens, or using the first day that the client got sick, lost, or disappeared to find out what's wrong.

Other diagnosticians specialize in using one or more "tools" to ask the spirits what is causing the patient to get sick. In the ritual of diagnosis they use bean seeds, rice grains, coins, wood or baboon sticks, or chicken eggs. Diagnosticians are able to negotiate and offer animal sacrifices while conducting the ritual of diagnosis. In general, the majority of diagnosticians must refer their clients to other healers or a shaman for treatment or cure.

Almost every male head-of-household and some female in Hmong society knows how to perform simple soul-calling ceremonies. In difficult cases, more complex ceremonies must be held by skilled practitioners. Soul-calling ceremonies are the most common practice by non-Christian Hmong. Soul calling involves the sacrifice of two chickens, two or more eggs, a pig, a cow, or buffalo.

I will now show you an example of a shaman at work. This is a videotape of a shaman trying to find the missing spirit of a sick little girl. He calls his friendly spirits to assist him in a ceremony that goes back to the old homeland in Laos and before. [CHANTING] He may even have to fight with demons to bring back the lost spirit and cure the child. [CHANTING] Soon the family stops paying attention and begins talking and moving around and socializing. It is all right, the shaman is far away: They explain, "The noise does not bother him." He chants for 2 solid hours. Sometimes, he goes on for 6 hours. When he returns he cast the divining horns and burns some colored paper money for the spirits. This completes his work.

Freida Ann McNeil: Faye Belgrave apologizes for being unable to be here. I will present the work that she has been doing. Ours is a comprehensive prevention model with a theoretical basis whose effectiveness has been proven. We are using social cognitive theory, self-in-relationship theory, and Afrocentric theory. We address the issue of being African American, a female, and a preteen or teen.

I want to talk to you a bit about the work that Faye Belgrave has done with relational approaches to interventions for African American females, and to tell you about why we are doing this work.

Most of you who work with African American families know that there are many issues and problems associated with some of the conditions that the families are in. Our work is primarily with young African American female adolescents who reside in low-income communities and are at high risk for early sexual and drug involvement and low school achievement.

The earlier discussion began to make me think about what protective factors in certain families help certain girls versus what protective factors are absent in other families that leave girls exposed to these risky behaviors. We are beginning to learn the problems are not just association with the family. The community and the neighborhood, and significant adult females, can provide supports to the girls that might make a real difference.

The majority of our work is with young women in low-income communities. However, in a current study we are also working with a school-based population and their backgrounds and housing situations are more mixed.

The problems of early, unprotected sexual activity, drug use, and low academic achievement are compounded for those who live in low-income communities. Even though we are all aware of this, it is important to mention again, that young women living in public housing communities are really having more problems in regard to these risky behaviors.

We chose to use a relational approach because a recent study indicates that strong ethnic identity is associated with increased academic achievement. Cultural identification and ethnic identity support individuals in their functioning in the school setting, decreases drug use, and decreases risky sexual attitudes among the target populations. This finding has been most critical in our work, not only with the girls directly, but with their mothers. We have used this research to develop our parenting programming. We work on our connections with mothers to help them understand the importance of deepening and creating fulfilling family relationships with the girls.

Interpersonal relationships and connections are primary in the development of identity for girls. When positive and fulfilling interpersonal and relationship needs are not met within the primary socialization unit, they may be met through destructive relationships and activity. Among people of African descent, relationships are strongly valued and Afrocentric beliefs of communalism, respect for elders, and interdependence are found. Therefore, the idea that relationships or a relational approach, an approach that establishes a relationship with the young woman and her family and then moves further to transmit information, might be very appropriate for this population.

What are the features of relational interventions? Our data come from our project in metropolitan Washington, D.C. There were about 200 participants, and 91 in the comparison group. The intervention lasted for almost 2 years.

In a relational intervention for girls, direct line staff were females whose values and life style were congruent with the program objectives. Staff had to be able to model healthy behavior to participants in their interactions with each other. In order to maintain staff cohesion, continual staff training was provided. The staff was comprised of older girls, and in our current project they are primarily college women. The college women present good modeling for the girls, because they are not so far removed from the girls in age, and they present a very positive picture of what a woman can achieve.

The process by which the intervention is conducted is very important. Sufficient time must be devoted to bond the staff and develop cohesiveness. Therefore, we do not rush through relationship building in our project. We have to train people to allow time for the development of the positive interaction among the girls, between staff members themselves, and then between the staff and the girls. We have meetings before each intervention session and present a prepared presentation for each session, each with a goal and an objective.

Additional time and added sessions may be needed for bonding in the form of retreats and team development and activities. We use retreats in each intervention that we do. In a school-based intervention we hold retreats with the school leadership. We also hold retreats with the girls and their parents. At these retreats the parents have an opportunity to ask questions and to understand the context of the program.

Methods for presenting curriculum sessions should be interdependent and consistent. Sessions could include (a) lessons on influential African American women, girls' heroes, and women's role in society; (b) lessons on self-esteem, self-worth, and other related topics; (c) lessons on drugs, HIV, and pregnancy; and (d) opportunities to practice skills within a supportive environment.

Sessions may begin with libations, which we are careful not to confuse with a religious opening. Spirituality may be acknowledged by the opening ritual of giving thanks to the creator and by encouraging each person to consider her own spirituality. Verve and rhythmic activities are used in learning activities and exercises through music and movement. We present information in various mediums (i.e., oral, visual, tactile). Last we have a closing. Everyone knows what to expect and it makes the girls feel very comfortable.

Feelings of self and others are acknowledged, and sensitivity to affect and emotional state is emphasized. We always have extra women at the interventions to deal with girls who are not functioning at the level of the others. We do not isolate them without attention; someone is always there to be with them.

Opportunities should be provided to practice skills within a supportive environment. Skills might include drugs and sex refusal skills. We have role-plays that are revisited at the next session. We have sent home books in which we ask the mother to read about the intervention and to practice these subjects with her daughter. That connects us with the home as much as possible.

In our last cohort the most popular session was the one where we brought in a young Black woman who was an entrepreneur. She does hair and nails and is interested in beauty and health. It was so interesting to those of us who are interested in some of the "harder" topics. She was the one who commanded absolute silence from the group. I mean, the girls were impressed and attentive to her and she was able to get them to interact with her because beauty is important to these girls.

This comprehensive prevention model is based on social cognitive theory, self-in-relationship theory, and Afrocentric theory. It addresses the culture of African American, preteen and teen females.

Mary Lou de Leon Siantz: My work is in the area of culture and mental health among Mexican fathers in the Migrant Head Start program. I was formerly the National Mental Health Coordinator for the Migrant Head Start program providing training and technical assistance to Head Start staff. From that experience, my interest grew. I became familiar with the lifestyle: the extreme risks, but also, the many positives within the families. That has been the focus of my research ever since. This study built on two earlier studies and focuses on fathers.

There is a current view is that Mexican immigrants coming to the United States have a low incidence of mental health problems. That is not necessarily true. The reasons for this perception may be that they do not have someone they can talk to, or they may be afraid to deal with social service agencies. There are many possible reasons for this phenomenon.

The majority of families in my study were fairly recent immigrants. An important consideration when working with Hispanic populations is their native culture. Are they Cuban, Puerto Rican, Mexican American, Guatemalan, or Latin American? Even though we have a common language and religious practices and beliefs, there are some fundamental differences.

Mexican Americans, because of the proximity of the border, come in and out much more easily. They are the poorest of the group, the least educated, but the largest in number. However, regardless of who enters the U.S. first, by and large they eventually unite the family. This is the case with the migrant farm workers.

There are three groups of migrant workers in the U.S.: the east coast, the middle states, and the west coast. I have been working with migrant workers in Texas who are seasonal laborers. There are approximately 4.2 million migrant and seasonal farm worker families in the United States. About 25% of their children are under 6 years of age. For this population housing conditions are poor, income is low, and education is limited. They work long hours, have limited mobility, are socially isolated, and suffer racism and discrimination. I learned early that in working with this migrant group it was very important to form a partnership.

This sample consisted of 220 fathers registered with the Texas Migrant Council, Migrant Head Start program. They ranged in age from 19 to 67 years. They all had a preschool child. It is not uncommon for an older Mexican male to have a much younger wife. One should not be shocked to see this kind of age range. The average age was 32, and number of children was 1 to 13, with a mean of 3.5. They have strong concerns about the children and about the family. Given that, one basic cultural value that must be considered is the role of the father in a Mexican American family. A father is considered the head of the household. However, this may be somewhat in flux now that both parents are usually working.

The interviewers were former migrant farm workers themselves. They had completed a high school education and they had to have, as all of you know, at least a high school education to be able to participate in the Head Start program if they were doing something active with the kids. The janitors and the cooks don't have to have a high school degree.

Former migrant farm workers themselves conducted interviewers. One problem in recruiting the sample and in working with fathers is that they had not been spoken to in the past. Mothers are frequently asked questions, but fathers have rarely been included. Many families do not have telephones, and must be visited personally. One father had to be asked to participate three different times. He asked, "Why would anybody be interested in anything I have to say and how I feel and what is happening to me and my family?" The interviewer answered, "You know, you produce the food that we eat. Because of what you do we have these wonderful fruits and vegetables on our tables. So we want to help you." This is an example of being a part of the community. I frequently feel like an Avon lady because I am trying to sell the fact that this is a partnership, that I am really trying to help them, and that we are trying to see what kind of resources we can find, but we need to have some facts. We cannot just make changes and provide services based on a few solitary cases.

In this study of mental health, I wanted to know if they felt that they were in control of their lives. Obviously they felt that they had very little control. Additional findings were a lack of social support, problems in life conditions (this is long-term as opposed to life events), long-term stress (how they felt about themselves and family stress), and depression. An important area to look at is level of acculturation. That is a very difficult variable to measure, especially in terms of how that impacts their mental health. One way of doing it is by using the Hispanic Health and Nutrition Examination Survey, in which the majority of these men identified themselves as Mexican. Other considerations are the number of years in the United States and language usage. Even though many of the migrant farm workers do come from Mexico seasonally, many have been here for periods of time. They are caught in a cycle of poverty and they find it almost impossible to change their condition.

The most significant finding is levels of depression. There were 61 fathers who showed a moderate level of depression; and 49, or 22% showed a high level of depression. Clearly, the majority showed some depression. Among the Mexicanos (least acculturated) 53.1% have severe depression. Among the Mexican Americans (most acculturated) 38.5% were found to be severely depressed. So there really wasn't a significant difference between the two groups.

The Migrant Head Start staff have not been highly trained in the area of mental health. The mental health coordinator is usually also the health coordinator, with a bachelor's degree as a minimum, but most often in a profession that offers no expertise in mental health. The same problems that were identified in 1978 still exist.

Many of their depressive symptoms are manifested in psychosomatic illness. The worker will go to a primary care provider like the Yakima Valley Farm Workers Clinic, or the migrant health clinics that are offered to seasonal laborers and present symptoms such as headaches and nervous and upset stomach. There is no physical reason found for these symptoms, so the primary care provider cannot be helpful. There are no counseling services at the clinics and they cannot provide referrals because of lack of funding for those services for families.

In terms of policy implications, I am advocating for money to provide primary care to migrant farm workers. The area of mental health can no longer be ignored, because of not only the direct effect that it is having on mothers and fathers, but the long-term effect on their babies and on their children as they are growing up.

Lee Pachter: Listening to and reading the papers created a bit of a challenge in trying to link these very disparate papers together, but it actually became a lot easier than I thought. One of the ways of linking these papers together is that all of the presenters obviously showed a great deal of respect for the cultures that they are working in. They did not approach it from a Western biomedical perspective, but rather tried to gain entry into the community through a respect for the culture and trying to translate that into health care, mental health, or personal development.

The other interesting aspect is the multidisciplinary approach that we see in all of these different presentations today. We have heard about approaches that work with social services and social workers, public health, and nursing. As a physician, it is impossible for me to understand the very sophisticated and complex interactions that go on in the community without help from nonmedical personnel.

These are a few of the ways I was able to put together all these papers. I think that the program presented by McNeil and Belgrave is an excellent example of creating an intervention based on culture-salient value systems, attitudes, beliefs and practices. They identified problems that were prevalent in the community, early initiation of sex and drug usage, and tried to create a culturally based approach to altering behavior. They did not use culture just as a vehicle to transmit a message about health education. They attempted to change behavior by teaching culture. I think that is extremely important. It is a much deeper approach than just using culture as a vehicle.

They tried to instill ethnic awareness, pride and identity. They found, as they looked in the community, that there was a discrepancy between traditional African or Afrocentric cultural beliefs and values, and adolescent risk behaviors and they tried to mediate between that discrepancy by restoring a sense of culture through spirituality, collectivism, oral tradition, respect for elders, a sense of gender identity, and also acknowledging growth and maturation through rites of passages. I think that is another very strong technique that we can utilize in the African American community.

At St. Francis Hospital in Hartford I run a sickle cell service for 130 families. In sickle cell many of the parents and children feel that because of their illness they cannot participate in normal developmental activities such as sports, leisure activities, swimming, dancing, things such as that. The parents are frightened, and rightly so, about this illness. They almost have the children living in a glass bubble. As a physician I know this is not healthy. I want children, even those with chronic illnesses, to be able to participate in as many culturally and developmentally appropriate activities as possible. So we teamed up with the Artists Collective to provide services for these children. Every Saturday sickle cell families and children can go to the Artists Collective and participate in activities such as African dance, African percussion, martial arts, music, singing, etc. Even the 1-year-olds have creative movement.

I think it is important for a few reasons. First, just to show these children and their families what their physical, emotional and mental potential can be and that they do not need to be sitting on the sidelines because of their illness. But we could have done that at another place, like the YMCA. We opted to provide these activities at an institution that also instills cultural pride. I think it is especially pertinent for an illness such as sickle cell where there is such a cultural stigma attached. I wanted to try to balance that stigma with some positive aspects of their culture so that they can be proud of their cultural identity and have pride in themselves, their families, and their community.

We are also working with the community to try to create a system of health education. As we found out, and as we should have known beforehand, in an African American community oral tradition is very important. We need to utilize some of those cultural strengths in our health education. So we are trying to create medical groups who can teach about the culture and about health through poetry, song, and the traditional African oral tradition.

In terms of outcomes, I do not think that a specific intervention, such as creating cultural awareness and pride might necessarily show up right away in decreasing drug usage or later initiation of sexuality. But I do not think that is necessarily bad because you are intervening in one of the consequences of the process of social stratification and the effects of societal racism.

I think that you are working on that respect, which is even more important. I think that in itself is going to create better gains in the overall psychological development and well-being of these children and adolescents and help their overall development. Then hopefully, it will trickle down to some of the more objective measures of success, such as drug use and sexuality.

Siantz also talked about the importance of context. One must take into account the effects of moving around and not having a permanent residence along with the issue of acculturation. I think more in terms of psychological or individual acculturation and it is possible that those individuals who do best with regard to health practices or health outcomes are not those who are acculturated, but those who are bicultural. We really need to change our concepts from acculturation to biculturalism. In other words, measure separately the degree of ethnic pride and association in ones host culture as well as ones original culture. I would posit the hypothesis that those individuals who are active in both cultures might have the best outcomes.

Chou Thao gave an excellent overview of the Hmong ethnic/cultural health beliefs and practices. It gave me an opportunity to reflect on how we as clinicians can practice what is called "culturally sensitive" or "culturally competent" health care. One cannot read a textbook or a journal without reading about cultural sensitivity and cultural competency. I think that is fine, but the concept is really a very nebulous one. I will read to you my definition, what I published on what I think culturally sensitive or competent health care is. "It is a way of practicing medicine that respects the beliefs, attitudes, and cultural lifestyles of our patients. It acknowledges that health and illness are in large part molded by variables such as ethnic values, cultural orientations, religious beliefs, and obviously linguistic considerations. It is a way of practicing health care that acknowledges that in addition to what we learned in medical school and nursing school, the physiologic aspects of disease. In addition to that, the culturally constructed meaning of an illness is a valid clinical concern, perhaps the most valid clinical concern. Also, very importantly it is a way of practicing that is sensitive to within group or intergroup variations and beliefs and practices and does not stereotype based on any group, whether it is ethnicity, class, race, gender, age, etc.; that there is a great deal of intracultural variation."

We have to step back and try and remember why we really went into this field it in the beginning. I approach medicine as an anthropologist. I have a great opportunity that not everyone has, to delve into people's lives. People have given me the opportunity to talk about things that are usually taboo to talk about in social situations.

Question: What can we do in our communities to foster improvement in communication between patients and medical personnel?

McNeil: Some of this can be done without money, by gathering the young women together and practicing how to interact with a physician. Also, try to identify the physicians who are more sympathetic and work with the women to steer them in that direction.

Siantz: The fact that you are empathic and sensitive to the problem they have communicating is important. Let her know that you are willing to work together, so she feels like she has a partner.

Pascoe: The question is about what can be done to broaden medical education. I think a more long-term approach, of course, is having people like Dr. Pachter teaching medical students and being the associate editor of a journal that is read not only the United States, but the world, and is consistently bringing up issues like this.

Pachter: I would hope that we would see cultural sensitivity in a broader perspective of doctor-patient communication and not ghettoize it into something that we just do with the other, because everybody is the other.

Siantz: I would say that across disciplines there is a greater focus on changing curriculums to reflect the diversity of the population in the United States. The message is not coming just from populations that need to be served, but also from an increasing number of members of multicultural groups in the health professions. Also Congress is asking the National Institutes of Health what they are doing to increase the research being done with multicultural populations. That indirectly forces universities to rethink their curriculums

Pascoe: I think that in medical schools the students are becoming more diverse as well.

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Innovative Reseach Methods

New and Interesting Data Analytic Techniques

CHAIR: John Hagan
DISCUSSANT: Margaret Burchinal
PRESENTERS: John B. Willett, Judith Singer

John Hagen: The presentation earlier by Professor Michael Rutter set the stage well for this session. He talked about the need for longitudinal research and its new measures for new ways of looking at interactions and so forth. Someone, right after his talk, said he made it sound so easy, and yet we know how difficult it is. It poses real challenges for those of us who are trying to decide what the next steps and directions are for research.

Our presenters, Judith Singer and John Willett, are going to be presenting together. It is an interesting challenge to introduce them because so many of the things they have done are the same on their résumés. They did, however, get their degrees at different places. Judith Singer's degree is in statistics from Harvard, and John Willett's degree is in quantitative methods from Stanford. Currently, they are both professors in and coacademic deans of the Graduate School of Education at Harvard.

Judith Singer has written extensively about research design and educational policy with a current emphasis on analyzing longitudinal event data. She and John Willett were awarded the AERA 1992 Raymond B. Catell Early Career Award for Programmatic Research. Singer is also co-author of "By Design: Planning Better Research in Higher Education," which is also with John Willett.

John Willett has shared some of these things, but he has also been a teacher of high school physics and math and taught in both England and Hong Kong. Thus, he brings an international flavor to his approach as well.

John B. Willett: Our presentation is entitled, "Improving the quality of longitudinal research." It was in Washington, D.C., more than 15 years ago, that we made our first joint presentation. We went to give our talk, and there was only one person in the audience. When we began to explain what we were going to talk about, the woman left. The talk, nevertheless, does appear on our C.V.!

We chose a generic title for our presentation. Rather than talking about one specific analytic method for dealing with longitudinal data, what we will do is comment on the analytic state of affairs in social and psychological research. In doing so, we thought we could perhaps offer some examples of ways of applying the newer, innovative methods, which we have been using ourselves in the pursuit of truth, justice, and the American way. First, Judith Singer will tell you some of the good news and some of the bad news about the way that these new methods are being used in empirical research today.

Judith Singer: We thought that if we were going to give a talk on how to improve longitudinal research, we needed to get a status quo about what the field was doing in terms of longitudinal research. We decided we would ask three questions about what was being done in terms of longitudinal research. The first two questions are: (a) How much longitudinal research is being conducted? and (b) Is it something that people are actually doing?

To answer these questions, we used the Psych-Info database, which is an easy way to search on-line. We did a keyword search on the word "longitudinal" between 1984, which was the first year that Psych-Info was computerized, and 1997, which was the last year for which they profess to have complete data. We found that in these intervening years the number of longitudinal papers had actually tripled from about 600 in 1984 to nearly 2,000 in 1997. Thus, there has been an increase in the use of longitudinal research.

The third question was two-part: Given this increase, how common is longitudinal research now in the year 2000, and what is actually being done and published in the journals? To answer that, we haphazardly selected 10 journals that were published in 1999. We looked at three issues of *Developmental Psychology*, three issues of the *Journal of Personality and Social Psychology*, two issues of the *Journal of Applied Psychology*, and two issues of the *Journal of Consulting and Clinical Psychology*. Setting aside all the theoretical papers, of the 159 empirical papers that were published in these 10 journals, one third, or 53 papers, were longitudinal in nature. That was much more than we anticipated.

Then, we went a step further and asked how many of these studies were truly longitudinal. Longitudinal is a word that is bandied about a lot. People say they are doing longitudinal studies when, in fact, they are doing cross-sectional studies of people who were age-heterogeneous. We found that about two thirds of the studies were multiwave—about one fourth involved three waves of data, while 38% involved four or more waves of data. I called John and said that we had nothing to say because people were not doing what we wanted them to be doing. We thought it would be quite boring. Then, we decided to read the papers more carefully to see how people analyzed the data. We discovered that while the designs were getting much better and more people were doing longitudinal research, the analyses lagged so far behind that there was an incredible need for thinking about what to do with longitudinal data once they are collected.

I will now provide a descriptive overview of what these 53 longitudinal papers presented in terms of analyses. Probably the biggest headline is that 90% of the papers used what we would call traditional analytic methods. Forty percent used repeated measures ANOVA with no parametric model for change. There is nothing intrinsically wrong with repeated measures ANOVA, but it does not capitalize on the strength of longitudinal data. One is not positing parametric models to look at things over time; one merely treats the same waves as related occasions without trying to posit an underlying process.

More problematic is that 38% used what we would call wave-to-wave regressions where people regressed T_3 on T_2, T_2 on T_1, T_3 on T_1, and so forth. These kinds of wave-to-wave regressions do not provide information about change over time or event occurrence over time. They do not answer the questions, and yet they are still a common method of analysis. A smaller percentage, 8%, did what we would call separate but parallel analyses, which is when one takes the data from Wave 1 and analyzes them, takes the data from Wave 2 and analyzes them, and then takes the data from Wave 3 and analyzes them to see whether or not his or her findings hold up. However, one is simply running the analysis on the same set of people and thinking the finding is something new, when the finding is the same thing all over again. Thus, the separate wave analyses do not answer the questions at all.

A smaller number, 6% or three papers, used what we would call separate, within-person regression models. For example, they would take data on people over time, fit regression models to each person's individual case, and then try to make some sense of the findings. While 15 years ago that might have been an accepted analytic tool, there is no reason to do those kinds of analyses anymore with the availability of modern software for doing longitudinal analyses.

The second set of problems we found as we looked at the papers was that about one third had other problems of analysis that were not necessarily unique to longitudinal data, but were issues of analysis that we wanted to raise with people who were doing developmental research.

For example, 13% of the papers used standardized regression coefficients. Standardization is one of these things that sounds appealing and makes one think it will help equate nonequatable measures. However, if something sounds too good to be true, it is too good to be true. Standardization does not do what it is thought to do. It is not going to equate nonequatable measures. It is not going to allow comparisons of the effect of the same predictor in different studies. It is not going to allow comparisons of the effects of different predictors in the same study. It is, in essence, a bill of goods, yet it is still being done.

Another 8% did the classic median splits by categorizing continuous variables. This is where one takes a perfectly happy, healthy continuous variable that one has spent all this money collecting and says, "There cannot be any information in this; let's put everybody into one of two groups." It is not unique to longitudinal analysis, but it is a terrible idea that still happens.

Another 8% did something that is truly foolish. They set aside data to "simplify" analyses. Think about all the hard-earned work and time spent collecting multiple waves of data. However, sometimes people do not know what to do with the data, so they just set them aside. Sometimes people set aside cases to try to achieve balance in their sample. That is a perfectly foolish idea.

Another 6% had a problem of ignoring the age heterogeneity in their sample. For example, they would collect longitudinal data on a group of people who were at different ages to start with. There would be a sample of children who were 3 to 5 years old. One tracks them over time but forgets that the children were at different ages when they started. Thus, instead of equating the children who were 3, 4, and 5 years old, one does the analysis by Wave 1, Wave 2, and Wave 3. However, the children were at different ages in the different waves, so the age effect is totally lost.

If one stops and thinks about it, these problems are obvious. Yet, we still see them. The bottom line is that fewer than 10% of the studies used what we would call "modern methods" of longitudinal analysis. Only 8%, or four papers, used individual growth modeling and analyzed systematic change in a continuous outcome over time. Only 2%, or one study, used survival analysis to look at whether or when events occur, even though many of the studies looked at event occurrence. These researchers had the longitudinal data, but they did not use the methods that we would like them to use.

Now, we would like to talk about how one can use modern methods to analyze longitudinal data. We will start out by giving a brief overview of the two different methods—modeling and survival analysis, and then we will talk about what having these methods and having longitudinal data can do in terms of answering research questions.

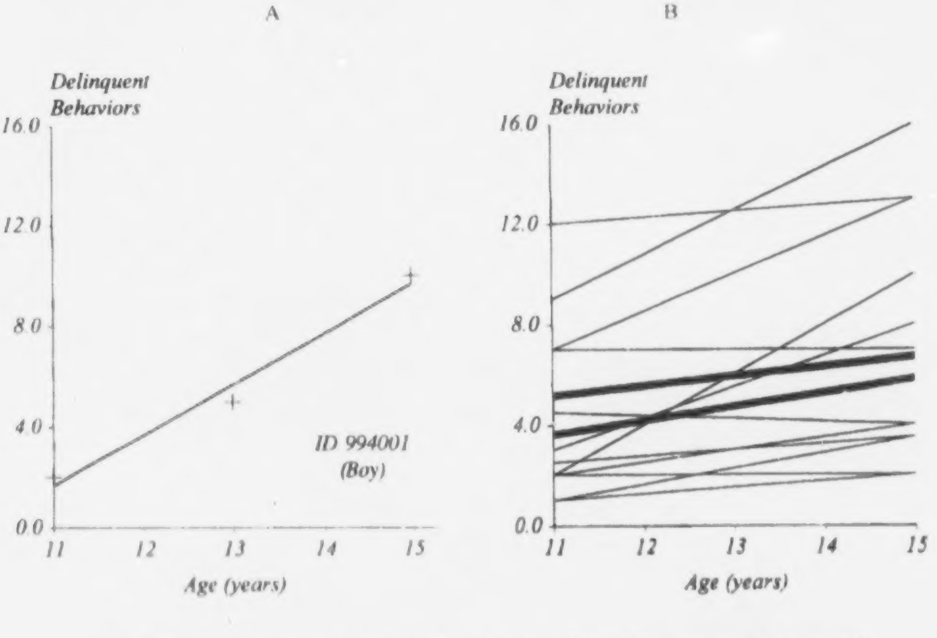
Willett: First, I would like to provide a brief explanation of what we mean by modern methods for modeling growth and change. These methods have their origins in the questions that people ask when they are faced with these kinds of data. When one has longitudinal data and is interested in measuring change, one finds oneself asking questions at two levels. At level-1, one asks questions about each individual in order to understand how each individual changes over time. One tries to map out the trajectory that each individual follows over time and asks questions such as: (a) Is this person starting out high? (b) Is this person starting out low? and (c) How rapidly is this person changing?

There is a set of questions at level-1 related to individual change trajectories. However, because each person has his or her own individual trajectory, it is also possible to ask questions about how the trajectories differ from person to person. This is the concept of level-2 where we ask questions about these interindividual differences in the change trajectory. Thus, we might ask questions such as: (a) In a group of young children, who starts out the highest, boys or girls? (b) Who grows the most rapidly? and (c) Do girls change more rapidly than boys do? These are all questions at level-2.

For example, we took data from the National Longitudinal Survey of Youth (NLSY) concerning the amount of adolescent delinquent behavior reported by children at ages 11, 13, and 15. There were about nine items on the NLSY. Children are asked to report how many times in the last year they have stayed out late without parental permission, stole something, listened to the Bee Gees, or were involved in other types of delinquent behavior. They respond on a classic 4-point scale: 0 means that they report no delinquent behavior, 1 means they report one delinquent behavior, 2 means they report two delinquent behavior, and 3 means they report more than two delinquent behaviors. We totaled up the raw scores and got a 27-point scale. It was not exactly continuous, but it was better than ordinal. Graph 1A (see below) shows that one young boy self-reports his level of delinquency as 2 at age 11. He has a score of 5 at age 13 and a score of 10 at age 15. To help interpret this observed data, we superimposed on it an ordinary least squares regression line, which is quite informative. This plot answers the level-1 question: How does Child 994001 change over time? At age 11, he does not report much delinquent behavior, but his self-reported level increases as he gets older.

There is a level-2 equivalent of this. Graph 1B (see below) shows similar summary trajectories for 12 children that we picked at random from the larger data set. There are considerable inter-individual differences in change over time for these 12 children. Some children start out quite low, and some start out high. Some children grow quite rapidly, while others are relatively stable.

Graph 1. Gender Differences in the Frequency of Adolescent Delinquent Behavior (individual #994001 and 12 person subsample drewn from a full sample of 124)



Data from the *National Longitudinal Survey of Youth* (1988, 1990, & 1992)

An interesting level-2 question that can be answered with these data is: On average, do the delinquency trajectories of boys differ from those of girls? It looks as though the net elevation of the boys' trajectories is higher, on average, than the net elevation of the girls' trajectories. I am reticent to make any conclusion about this, because there is considerable scattering. However, at least I can come close to answering the level-2 question with this kind of exploratory analysis.

To do a formal analysis of this kind of information, one must fit what is called a multilevel model for change. This is where the innovations have occurred in the last 15 years. In order to analyze these data, one needs statistical models that can be fit to the data. However, because this is a hierarchical situation and because there are questions at level-1 and level-2, one needs a level-1 statistical model and a level-2 statistical model.

We need a level-1 growth model to represent our hypotheses about the way in which each individual *i* is changing over time. With only three waves of data, a limited window on the child's development, often the best one can do is a straight-line model. We propose a regression model for this individual *i*. We say that for an outcome *y*, an individual *i* on occasion *j* is a straight line and has an intercept ($y = 0$) that is unique to the individual. It has a slope, *Y1*, that is, again, unique to the individual. The *t* represents time, and there is a residual, as one would expect in any regression analysis.

Thus, we have a level-1 growth model that represents the individual's trajectory. For level-2, there are hypotheses about the way these trajectories differ for boys and girls. The level-2 statistical model examines or makes hypotheses about the way the trajectories differ for boys and girls. It looks like a pair of simultaneous regression equations. The outcome, the dependent variable, is the parameters from the level-1 model. At level two, we say that the intercepts and slopes of the individual trajectories can vary in interesting ways.

The first component of the level-2 model says that the individual intercepts are related to gender. We have articulated gender by the word "boy," which takes on the value 1 if the child is male. Of course, if the regression coefficient associated with that predictor, *g01*, is statistically significant, it will mean that there are clear differences in intercept for the trajectory for boys and girls. Similarly, the second component of the level-2 model expresses any possible gender differences in the slopes. Again, the crucial parameter here is *g11*. Of course, there are some residuals. The most difficult part of the analysis is conceptualizing the statistical models. It turns out to be relatively easy to fit these models because nearly every piece of software on the market today can fit these multilevel models. In fact, when we did this, we fitted these models to data and used SAS PROC MIXED. There are many types of software that can do this.

We found that we were able to test hypotheses, particularly about the *g01* and *g11* parameters. What we were able to show is that there are statistically significant differences in intercepts. Boys do report generally net higher levels of delinquent behavior. However, the differences in slope are not statistically significant. Thus, *g11* was not statistically significant.

We plotted out a fitted trajectory for a prototypical boy and a prototypical girl. The notion of using fitted plots to display the findings of these complex kinds of analyses is a useful way to talk to practitioners and policymakers. They may not understand the analysis in all the statistical models, but it is clear when one explains the fitted plots and key findings.

Singer: John described a set of models for looking at change in a continuous outcome. I would like to talk about models for studying event occurrence. It is a totally different idea. The models are known as survival analysis models, and they are designed for studying whether and, if so, when particular events occur. They were developed originally to study human lifetimes in medicine where the event of interest is death. Therefore, the language of survival analysis is coded in rather negative terms. However, while we are going to talk about hazard, risk, and so forth, the events do not have to be negative; they can be quite positive. For example, one can talk about death, relapse, or discharge and so forth, but one can also think about when it is that children say their first word, take their first step, graduate from Head Start, or enter school? The events can be both negative and positive.

The problem in studying event occurrence is an issue known as censoring. The idea behind censoring is quite simple: What does one do with data from the people who do not experience the event of interest during the period of data collection? For example, one studies children over time to see how long it takes before they say their first word. One studies children within a narrow window, and some of them may not have said their first word by the time the data collection is finished. It is not known when or whether they will, but we presume most of them will. All one knows is that by the end of data collection, some children have not yet experienced the event. However, the fact that they have not yet experienced the event tells a lot about event occurrence, because it is known that they have not had the event. They might have it eventually, but they have not had it yet. Thus, the problem of censoring is that one does not have information on the very thing one wants to know: the time when the event actually occurs.

The way survival analysis resolves the problem is by not modeling the event times per se, but by modeling a function of the event times. It is known as the hazard function, which is related to the event times in the following way: The hazard function tells one about the conditional risk of event occurrence at any given time, given that the event has not already occurred. It gives the probability that the event is going to happen. What is the probability that the child is going to say his or her first word at 16 months, given that he or she has not yet said his or her first word? What is the probability that he or she is going to say his or her first word at 20 months, given that he or she has not said his or her first word before that? What about at 24 months? One can imagine doing this over time. The profile of those risks over time is known as the hazard function. In survival analysis, instead of modeling the event times, we model these conditional risks over time.

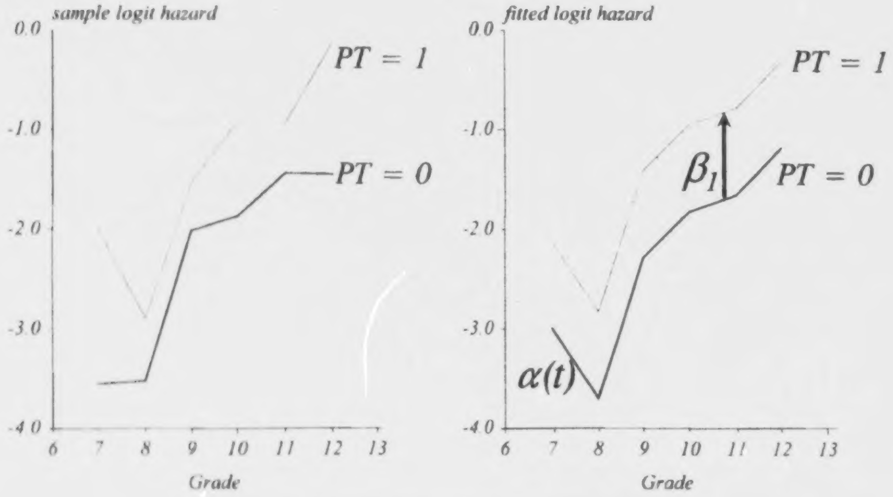
Now, broadly speaking, there are two types of survival analysis, and they depend upon the measurement precision with which one knows when or whether the event occurs. In continuous survival analysis, one knows precisely when the event occurs. Survival analysis was developed by modeling death. It is the type of event that is usually recorded quite precisely. Since one knows exactly when the person died, one might know quite precisely when the child said his or her first word. In that case, time is measured continuously.

Hazard is what we call a rate in statistics. For the statistical models that we build, we end up modeling its logarithm. In many contexts in the social sciences, we do not have that kind of precise information. All we know is the time interval when the event occurred. We know that a child might have dropped out of school in the first or second semester of ninth grade. We might know the month when the event occurred as opposed to the day when the event occurred. In that case, hazard is a probability, which is much easier to think about in terms of language, and we model its logit. For all the examples that we will be giving, I will talk in terms of discrete time because it is an easier entrée into the field. However, all of the ideas that I am talking about generalize completely into the continuous time world.

I will start with a simple example to make this concrete. The research question is: When do boys first have sex? In one study, 180 adolescent boys were tracked from 7th grade to 12th grade. Each year the boys filled out a questionnaire asking about their sexual activities. Here we are looking at the risk of having sex as a function of a single simple predictor, which has been labeled here "PT" (Parenting Transitions). This is a dichotomy that measures before the study began whether the boy had ever experienced a parental transition, such as a divorce, if his parents were cohabiting, or if the parents were breaking up.

Graph 2 (see below) shows the risk of event occurrence as a function of parental transitions. These are equivalent to looking at the data points. This is as close to the raw data as one is going to get. If one looks at those two functions, one sees two sorts of things. One is that for both groups of boys, both those who experienced a transition and those who did not experience a transition, the risk of having sex for the first time starts out relatively low at seventh and eighth grade and then gradually increases over time. Among boys who have not yet had sex, the risk of having sex in each successive grade increases over time. The second thing that we see is a consistent difference between the lower hazard function for the boys who have not had a parental transition and the upper hazard function for the boys that have had the parental transition. One sees that in each time period, the hazard function for those boys who have had the parental transition is consistently higher than it is for the boys who have not had the parental transition. It tells us that in each successive grade, the risk of first intercourse is greater for the boys who have had the transition than for boys who have not had the transition. What the survival analysis model and the fitted models do is codify these kinds of effects. In essence, these are statistical models about the population that we can fit to sample data and interpret the parameters of the model much like we did in the growth-modeling context to answer our research question.

Graph 2. Discrete-Time Example: Grade at First Heterosexual Intercourse as a Function of Early Parental Training



$$\boxed{\text{logit } h(t) = \alpha(t) + \beta_1 PT}$$

Data provided by Capaldi, Crosby and Stoolmiller (1996)

According to our model, *a(t)* is what we call the baseline profile of risk for a baseline group of people. In this example, it is the boys who have not experienced a parental transition. *b1* is a parameter that captures the effect of the predictors that might be in our model. Here the only predictor is parental transition, and it is dichotomous. *b1* captures the shift in risk between the two groups of boys, thereby answering our research question. In these particular data, we find that the magnitude of *b1* is quite high and statistically significant. In fact, the odds that a boy whose parents have split up will have sex are two and a half times greater than the odds that a boy whose parents have not split up will have sex, which is quite a large effect.

One could imagine having other predictors in the model. One can stream in continuous predictors or dichotomous predictors and talk about their effects using these kinds of graphical methods to convey the findings. The kinds of models one can build can answer quite sophisticated research questions.

Willett: So there are these sets of methods—individual growth modeling and survival analysis—that we think are important for the types of questions that developmentalists have. Why are we promoting them? It is because we think that they are a good thing. They solve many of the problems that have been raised in the past in developmental research, and they resolve many of the issues that we alluded to in the bad news section of the survey that Judith talked about in the beginning. In fact, there are many advantages for the kinds of research that developmentalists do, and we would like to present four that we think are particularly important.

The first important advantage for these methods is that they allow one to incorporate multiple waves of data in the same analysis. Of course, that means that as more waves of data are added to the analysis, there is more precision and more power. Thus, one is more able to reject the null hypotheses and better able to detect the effects of interest.

Another advantage is that one can learn in more detail about the trajectories of things that are occurring over time such as the trajectories of growth and the shapes of hazard functions. One can do a better job of learning about temporal patterns over time. One is not limited to investigating linear change; for instance, since it is possible with many waves of data that one could hypothesize curvilinear or even discontinuous change for children's development. One can hypothesize all kinds of interesting features for the shape of the hazard functions, for the ways that events take place over time.

The third advantage, and this is a particularly interesting advantage for developmentalists, is that these methods, because they incorporate multiple waves of data, not only permit the outcome to vary over time, but also permit the predictor to vary over time. Therefore, one can incorporate time-varying predictors in the analysis. It is our view that in developmental research, time-varying predictors are often more interesting than time-invariant predictors. For instance, there may be an intervention such as Head Start. A child could be included in a Head Start intervention, but it may be that over time the extent to which he or she is exposed to the intervention fluctuates. We do not simply have to classify the child as being in the intervention or out; we can actually code the time-varying nature of his or her exposure to the intervention and incorporate that information in the analysis. It may be the aspects of the child's background that change—siblings may leave home, parents may get divorced, or new babies may arrive. These variables can also be included. Finally, personality variables themselves vary over time. A child's self-esteem may fluctuate. If one is treating a variable, such as self-esteem, as a predictor, one can accommodate the fact that it is fluctuating over time. An interesting feature of longitudinal data analysis is that one can test whether the impact of a predictor itself fluctuates over time, that is, whether there is an interaction between a predictor and time.

The fourth advantage is that it is entirely possible that an intervention may have an enormous impact on the child initially, but then the effectiveness of the intervention declines. That would be an interaction between the intervention and time. Some effects may dissipate, increase, or become especially pronounced at particular times. These types of interactions can be included in the statistical model. Thus, there are some clear advantages for thinking longitudinally and for thinking about these new methods.

We will provide some further examples to illustrate these advantages. The first example is hypothetical, but it follows up on the first advantage that I mentioned earlier—the notion that if more waves of data are incorporated in an analysis, there will be more power and precision. This is obvious since if it were not the case, none of us would even be considering adding more data to our analyses.

Imagine there is a trajectory of change over time. Think about the slope. The slope represents how rapidly a child is changing. Picture that on the vertical axis, it is not the slope but the standard error with which we can measure that slope. It is a measure of the precision with which we know the child's range of change. On the horizontal axis is the number of waves of data used in the design. We start with a three-wave design because one can only estimate precision with at least three waves of data. Essentially, we are assuming that this is a linear change trajectory. There are some interesting features of this plot. As waves of data collection are added to the design, one sees the standard error decline smoothly. In other words, as more waves are added, the precision with which one knows an individual child's change increases. There is higher precision for the measurement of change.

Even more dramatically, the standard error decreases, meaning the precision increases. A more interesting feature is that the steepest slope of this curve is at the beginning. This says that one gets the biggest bang for the buck taking a three-wave study and turning it into a four-wave study. There is a dramatic decline in the standard error and a massive improvement in precision just by adding that fourth wave. Then as one goes further and adds subsequent waves, one gets less of a bang for the buck. There is a clear message here: We should be thinking of adding more waves of data to our designs.

The same argument can be made at level-2, where we would be concerned with the parameter of reliability with which we can detect interindividual differences in change. It can be displayed as a function in a number of ways, and I could go through a similar argument; they just mirror each other. Essentially, we reach the same conclusion: Add more waves. The reliability with which one can measure change increases with additional waves. Again, one gets the biggest bang for the buck going from three to four waves. The message is clear: More waves give more precision, which gives more power. Another point I alluded to in discussing the advantages is that if one collects more waves of data, one is able to postulate a richer hypothesis since one can conjecture about interesting trajectories. One is not limited simply to thinking about straight-line trajectories. Thus, the notion here is to add more waves and ask richer and more complex research questions.

The next example is from a study that looked at the hourly wages of male high school dropouts. This may not be something that is of interest to people here, but one can substitute psychosocial variables in its place. I will discuss this further at the end of the presentation because it has particular relevance for development.

However, in this particular case, we were working with an economist, and we were interested in the hourly wages of male dropouts after leaving high school. In particular, we wanted to know if one followed them over time and looked at their wage trajectories, was there some effect of taking the General Education Diploma (GED; an alternative to high school graduation that dropouts can choose to obtain later).

We have pulled two test cases from the data set. These were not picked at random; they were picked to illustrate a point. We plotted the longitudinal wage trajectory of a dropout who never took the GED. On the vertical axis, we plotted hourly wages, such as $5.00, $10.00, and $15.00 per hour, corrected and converted to 1990 dollars. Along the horizontal axis we plotted years of work experience in the labor force. One boy dropped out of high school and by the second year in the labor force, he was earning the princely sum of about $5.50 per hour. Over time he gained a few cents, so that after 15 years in the labor force, he was earning about $6.00 or $7.00 per hour.

We then plotted the trajectory of a boy who later took the GED. When this child dropped out of high school, he also was earning about $5.00 per hour after a couple of years. Then he won the lottery. After going back to his normal occupation, his trajectory continued. After 8 years, he took and passed the GED. From that point on, his hourly wage rose. His trajectory rises quite rapidly and also shows some evidence of curvature.

In inspecting data like these and being interested in the GED, we asked ourselves what the impact of the GED is on an individual's wave trajectory. How could we address that question? Thinking back to an earlier point in my presentation discussing the multilevel model for change, we had to think about a level-1 model that would describe this trajectory. Our level-1 model in Box 1 (see below) shows our outcome is not hourly wages, but the log of hourly wages. We did this because this is what economists like to do. Wages always have a long positive tail. By taking logs, one pulls the tail in and makes the properties of the measure better.

We thought we saw some evidence of curvilinearity, so we adopted a quadratic growth model. There were three terms: (a) an intercept, (b) a linear slope, which are similar to the two I mentioned earlier, and (c) a quadratic term, the square effect of time whose coefficient represents the curvature of the trajectory. This permits the trajectories to be curved over time. We wanted a curved trajectory, but we also wanted the trajectory to be able to jump when the child obtained his or her GED. Thus, we added a fourth term and this predictor, GED, is essentially a time-varying predictor. It has value 00000. When the child obtains the GED, it changes to 11111. Thus, it is a time-varying predictor. We put it in the level-1 model to allow the trajectory to rise suddenly upon the person's receipt of the GED. The two pieces of it would still remain parallel, although there would be a jump in the middle. We also wanted the two pieces of the trajectory to have a different linear slope and maybe even have a different curvature, so we created two new time variables. The variable *a* represents time after the GED and has value zero all the way up to the GED. Then it counts one, two, three, four, and so forth, counting time from receipt of the GED. We also squared it. This permits the trajectory to change in slope and curvature.

In the level-2 model (see Box 1 below), we were interested in a whole variety of family background characteristics, particularly race/ethnicity, in terms of both elevation and then the impact of the GED. We were particularly interested in whether, through the GED, minorities could recover the wages that they might have lost on dropping out of high school since there are higher dropout rates among minority groups in this country. The GED is promoted to them as a way of recovering wages. Our interest was whether there was some impact for the different races and whether it was different for the different races. Additionally, at level-2, race/ethnicity is the principal predictor. There are five components of the level-2 model, one for each of the five level-1 parameters, in the same way as I described before.

Box 1. Multilevel Model of Impact of GED on Trajectory of High School Dropouts

Level-1 Model: Individual Wage/Experience Trajectory:

$$LnW_{ij}=\pi_{0i}+\pi_{1i}t_{ij}+\pi_{2i}t_{ij}^{2}+\pi_{3i}GED_{ij}+\pi_{4i}a_{ij}+\pi_{5i}a_{ij}^{2}+\varepsilon_{ij}$$

where t = years of experience from dropout, a = years of experience from GED.

Level-2 Model: Inter-Individual Differences in Change:

$$\pi_{0i} \textbf{ thru } \pi_{5i} = \textbf{f(Background \& Personal Attributes)}$$

Data from Murnane, Willett, & Boudett (1997)

We fitted this model to the data. We are not promoting any kind of software—we use all software equally, but we used HLM to fit this model to data. Researchers who had done this before with the same data but using cross-sectional methods had been unable to demonstrate any effect of the GED. We were able to show that there was a statistically significant effect of the GED intervention on the linear slope for children who obtained the GED: their wages increased more rapidly after its receipt than before. We also found that there was no interaction with race. In other words, this effect applied across all races; all races benefited equally from the GED. Of course, the trajectories do not look the same—African American trajectories are lower. On average, they get paid less when they enter the labor force after dropping out, so their trajectories are essentially a few cents lower. However, they have the same kind of pattern upon receipt of the GED. This result was not detected using cross-sectional data.

The point we are trying to make is not to think hourly wages but rather to think child development. Think about a group of children being followed over time and being measured regularly on some interesting psychological or social outcome. At some point in their development, an intervention or a transition, such as a parental divorce, occurs. There may be some corresponding jump in the trajectory. In fact, one could contemplate children entering an intervention, leaving it, and then reentering it, and having several pieces to this kind of developmental function. This is the only way that one is going to be able to answer questions about those kinds of impacts. It is remarkable what can be detected that cannot be detected by doing cross-sectional analyses.

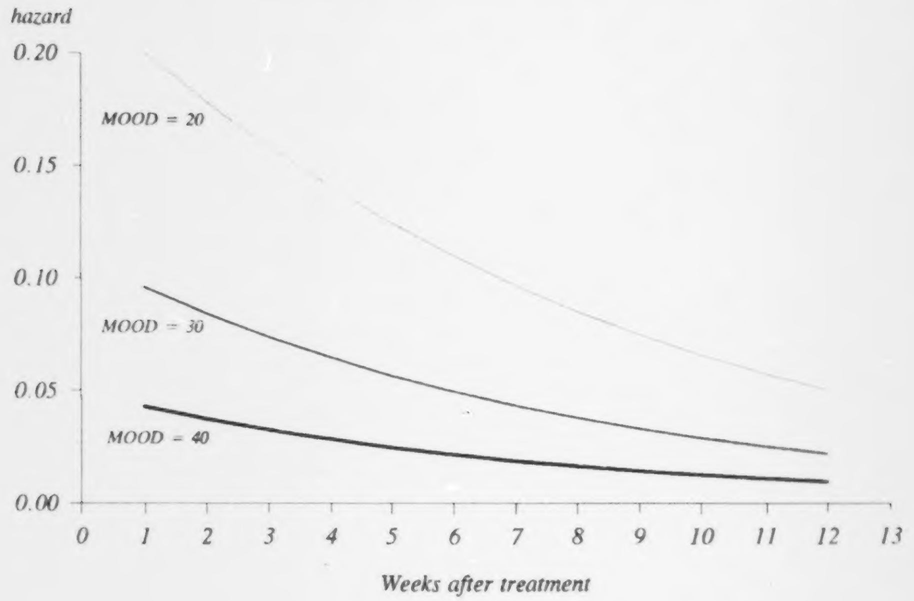
Singer: Picking up on this theme, we want to talk a bit more about what time-varying predictors can do. John mentioned earlier that as we track people over time, not only can the values of their outcomes change, which is what we are studying, but the values of the predictors of their outcomes can change as well. For example, in the Head Start context, one would certainly expect that things such as marital status could potentially change as well as the employment status of the mother or the father or their literacy levels in response to an intervention. In traditional statistical analyses, there is no way to allow the predictor values to vary over time. One is restricted to using the baseline levels of those predictors in the analyses. However, the values of these predictors would change over time as part of what one expects the intervention to do or what one would expect to see naturally. One would like the statistical methods to be flexible enough to incorporate these time-varying values.

I am going to illustrate this idea using some data not directly related to Head Start at all. This is on relapse of cocaine use. In San Francisco, Hall and colleagues tracked 104 newly clean and abstinent cocaine users for up to 12 weeks to see whether and, if so, when they started using cocaine again. They found that the risk to relapse to cocaine use is highest immediately after leaving the hospital, and then gradually over time the risk of relapse declines. It is a very common type of function. They were interested not just in documenting those patterns; they were interested in the effects of predictors. One of the things they were interested in was whether we could predict who was at greater risk of relapse on the basis of what they were calling the "natural high" (how much internally positive mood these ex-addicts had). The reasoning was that if the ex-addicts had some way of generating the high naturally, they would not turn to drugs.

Every week, the study participants would complete a questionnaire that assessed, among other things, the number of positive moods they had experienced during the prior week. The researchers did two sets of analyses to try to capture the effect of positive mood. First, they looked at it in a time-invariant way. In other words, they used the values of the mood predictor, when people left the hospital to see whether or not they relapsed to cocaine use. If one were trying to predict relapse to cocaine use based upon the baseline level of positive moods, there is absolutely no effect. This is a rather distressing finding, and one often finds that there is no effect of some of the predictors. They went back and, instead of using the baseline level of mood, used time-varying mood as a predictor. To resolve issues of temporal ordering, they used the positive mood score in the prior week as a predictor. They lagged the predictor and used it to resolve temporal ordering issues. They found that if time-varying mood is used, there is actually quite a large and statistically significant effect. This is a continuous variable that has a lot of value, so the coefficient of .09 is quite large and is negative. It is negative because it is telling us that the more positive moods one has the lower his or her risk of relapse to cocaine use.

Graph 3 (see below) shows the fitted trajectories for three prototypical addicts. One addict whose consistent positive mood score was 20, which is quite low in the 10th percentile on this scale; one had a score of 30, which is about at the median of this scale; and one with a score of 40, which is rather high in the 90th percentile on this scale. What one can see is that the risk of relapse is highest initially and then drops over time, but there is a huge effect of the mood variable. These fitted trajectories are showing an envelope of all possible fitted trajectories. Somebody who has a time-varying profile of mood level follows an intermediate trajectory that falls in between these.

Graph 3. Fitted Trajectory for Three Prototypical Addicts



Data provided by Hall, Havassy, and Wasserman (1991)

Time-varying predictors are incredibly powerful because they allow one to differentiate people in much more subtle ways than using the baseline value of these predictors. One can actually find patterns in these data that are different from what the prototypes are, but yet represent real individuals who might be experiencing the effects of the predictors in different ways than the average person. Time-varying predictors are quite powerful in this way.

For traditional statistical methods for analyzing longitudinal data, specifically repeated measures analysis of variance, one cannot use varying predictor values. It is a much more difficult proposition. The time-varying predictors are especially powerful because they allow one to investigate what we would call temporal hypotheses. By temporal hypotheses we mean the following: There are many predictors that one thinks might have an effect at the very moment they happen? Thus, one might think that an intervention has a very short-term effect right then and there. However, there are other predictors whose effects might be much longer term, and one might want to see whether or not their effects are drawn out over time. We are going to illustrate these with the notion of parental death and the effects of parental death on depression onset.

In Canada, Wheaton and colleagues conducted a survey using a random sample of people in Toronto. They administered life history calendars to participants asking them a set of questions about their mental health outcomes over time and then a set of questions about stresses that they had experienced in their life, such as illnesses, deaths of parents, unemployment, and so forth. The researchers were not interested in asking what the effect of unemployment is on depression onset, but rather in asking temporal questions. Is the event's impact short term? Does it affect the subject right then and there or does it linger over time? For example, for a child of alcoholic parents, is it something that affects his or her use of alcohol as an adolescent, or is it a risk that remains throughout a lifetime? Using these longitudinal methods, one can comparatively evaluate the evidence for answering whether the effect is short term or long term? In the Head Start literature, there are also arguments about whether or not the effects of Head Start are short term or long term; this operates as a natural opportunity.

Wheaton and colleagues found that the effect of parental death on depression onset was both a short-term and a long-term effect. However, the magnitude of the effect varied dramatically. The scale of the two panels is absolutely identical. There is a second predictor here, which is not just parental death, but gender, because it is well documented that women have a much greater risk of first depression onset than men. If parental death is coded as a long-term event, as in the example that John gave earlier regarding the coding predictors, one would have a predictor called parental death. This predictor would have the value 00000 until the parent dies, when it switches to one, and then it is 11111 for the rest of the data set. Contrast that with a short-term effect, where the value would be 00000 until the parent dies, then it gets coded up to one until the following year when it gets coded back down to zero, since we are looking only for the short-term effect.

When we code parental death as a long-term event, males, for example, initially follow the lower hazard function. Then when their parent dies, they switch to the upper hazard function, where they remain. Quantifying that effect, we see that the odds of depression onset for men are about 33% higher after a parent dies. One carries that risk throughout his or her lifetime, and that is statistically significant.

When we code parental death as a short-term event in the immediate year after the parent dies, we find that the upper and lower hazard functions are much more separated than in the previous case. If we start out with men again, if at age 15, a young man's parent dies, he would move to the upper hazard function for a male only for that one year and then would drop back down in the year immediately following to the regular hazard function for men. We find, in terms of the effect, that the odds of first depression onset are 462% higher in the year that one experiences parental death than in all comparison years. However, both the short-term and long-term effects are statistically significant though they address different temporal hypotheses.

One of the strengths of these longitudinal methods is that by judiciously coding these time-varying predictors, one can think about different hypotheses one might want to test and can comparatively evaluate the evidence for and against them.

Willett: Let me review the main core of our argument as a way of bringing this to a close. The good news is that empirical researchers in development are collecting decent longitudinal data. The bad news is they are not capitalizing on the power and richness of those data by using modern methods. Why? Ten years ago it was easy to understand why; there was no software to do this that was readily available. However, today there are many software programs of high utility available, and the methods are easy to use and interpret. We should ask ourselves two questions: (a) How can we promulgate the use of these methods in developmental research? and (b) Why do hurricanes always strike trailer parks?

As a closing comment, I forgot to shamelessly promote the fact that we have a book on these methods that is almost finished. We expect it to be published this coming year. It covers all of these methods and is integrated into a single volume. It has examples designed for the empirical researcher. We wanted to call it something exciting like "Naked in the Dawn," but the publishers insisted that we call it something like "Analyzing Longitudinal Data."

Hagen: Our discussant today is Margaret Burchinal, who is currently a research investigator at the University of North Carolina at Chapel Hill's Frank Porter Graham Child Development Center and a research associate professor in the Department of Psychology there.

Margaret Burchinal: I am impressed that the audience chose a methodological seminar over the many options that are available. It is a real tribute to where the field of child development is going that all of you made this decision. I would like to do my own good news/bad news in terms of where we are in terms of using longitudinal methods. The good news is that longitudinal methods are not difficult to use. The biggest problem we have is that these methods were not taught in graduate school when we were there, but they are being taught now. Longitudinal methods also are available in many forms of software and can be implemented with repeated measures data.

The bad news is twofold. First, longitudinal methods are extremely flexible so using them is not difficult. What is difficult is taking complex developmental models and longitudinal data that usually are collected with multimethods and multi-informants and trying to decide what from one's database will answer the question one wants to ask. This is where people run into trouble. They try to figure out exactly which conceptual model to fit to the longitudinal data. Balancing complex developmental theories with statistical methods that are flexible produces answers to research questions, although they may not be the same questions one thinks one is asking.

The other bad news is that as a field we have codified some rules about when to use these kinds of methods that may be too stringent. These methods are flexible. People have set up rules that have probably prevented many developmentalists from using, for example, individual growth curve methods when they only have two or three repeated measures and not the five repeated measures that are ideal for using these methods. The methods themselves can be used; they just have to be interpreted carefully. One cannot use these methods in a "cookbook" way. One must think carefully about what model one is fitting, how well one's data matches the model and the assumptions of the model, and then interpret the results cautiously.

Regarding some of the points that John and Judith made, the messages are ones that we need to hear as a field. As developmentalists, the issues we want to examine are exactly the four points that they made about: (a) precision and power, (b) looking at temporal patterns over time, (c) time-varying predictors, and (d) looking at interactions with time.

These methodologies are so wonderful because they provide us with a way that we can match our developmental models with the type of data that we have. We do not have to throw away information. That was the other message that I want to echo. It is expensive to collect longitudinal data, and it is such a pity if one cannot take advantage of every single datum collected that is appropriate for analyzing. These methods oftentimes allow one to do that.

On the issue of precision and power, the more information one has in the data, the more one can look at something with greater power. The more repeated measures one has, the more one can look at patterns of change and the more accurately one can look at the mean level and predictors of mean level as well as rate of change. If one wants to talk about development, obviously one needs to look at patterns of change over time within the individual, and then talk about differences among individuals in developmental patterns. That is what these methods allow one to do. What is nice about hierarchical linear models and individual growth modeling as well as survival analysis is that one does not have to have all data for all individuals at all time points. These models are flexible enough that one can include individuals who may have missed some of the assessments, such as if one is doing multiple wave data and started collecting data at different times for different children. In fact, even if children have missing data, as long as they are "ignorably missing," which is different than randomly missing, one can include the data without violating model assumptions. Ignorably missing means that the reason the data are missing is not related to the dependent measure. It can, however, be related to some of the independent measures. In fact, even if one has sensor data or data that are not even ignorably missing, I have heard researchers say it is better to include those individuals in one's data set and ideally do some imputation, for example.

By throwing away information from people with missing data, oftentimes one distorts the results. One would be generalizing these results to a world where people keep appointments and come every single time, which is not the world in which we collect data.

Similarly, with time-varying predictors, what is so exciting about child development is that we have these models that show that the environment impacts the child and the child impacts the environment. These methods actually allow one to try to look at that. Echoing what Michael

Rutter said in his presentation at this conference, these types of methods would allow one to look at some of the issues he raised. If one has longitudinal data, one should use methods that allow time-varying predictors as well as time-varying outcomes to be included.

Regarding John and Judith's final point, the issue of interactions with time, again, that is what development is all about. We would like to know not only what changes, but can Head Start, for example, not only boost children's cognitive levels and social skills, but also change their trajectory. Does exposing children to a stimulating environment change something about them so that they can then learn better and faster in the future? One example of this is a study that came out in the last volume of *Child Development*, which looked at quality of child care environments for low-income children in Chapel Hill, North Carolina. We found that when we looked at the quality of their child care at 1, 2, and 3 years old and their language development at 1, 2, and 3 years old, children who were in higher-quality child care showed better language development overall, but they also acquired language faster. It changed both their overall level of language as well as the rate at which they were acquiring language.

I am going to touch on a few more things that are some of my pet issues. There are rules that have come up, especially within developmental psychology, about when these methods can be used. There are other issues that keep coming up that have made it confusing for people to decide what kinds of statistical methods to use for analyzing their data. These include the idea that one should have at least three to five repeated measures before one gets any type of growth curve model. With today's software, one can fit repeated measures models that can include time-varying predictors without having three to five repeated measures. In fact, it would be a pity not to, because otherwise, information in the data ends up being thrown away.

The second issue is whether one wants to use latent growth curve methods versus hierarchical linear models. Here is where there has been a little debate in the field, but the bottom line is it probably does not matter. The two methods probably would allow one to address similar questions in similar ways. There are a few advantages to one approach versus the other. However, the biggest issue is not which approach to use, but trying to figure out what kind of conceptual model one wants to fit to the data.

The third issue is the one that I encounter as a statistician in working with developmentalists: how to select variables for one's model. It is trying to match the complexity of the developmental models with the reality of fitting data and looking at regression coefficients. It is also trying to select variables that are not so overlapping so that if one has measures of mothers' attitudes about childrearing, mothers' education, and mothers' sensitivity when interacting with the child, and one puts all three variables into a regression model and only looks at the regression coefficients, none of them may individually predict because they are so overlapping. Together, however, they may account for a lot of variance. That problem is not a longitudinal problem, but it is definitely compounded when one starts fitting longitudinal models. Again, think about exactly what model one is fitting and how much overlap there is among the variables.

The last issue that keeps coming up for me as a statistician who looks at longitudinal data is the idea of variable-oriented analysis versus person-oriented analysis. This is an issue that could lead us to some confusing advice about how to analyze data. It is the idea that using variable-oriented analyses, such as individual growth curve analyses, somehow is not person-oriented. It is confusing because, in fact, what one is doing is describing individual patterns of change. If people start talking about person-oriented analyses, I would urge them to look at the amount of information that is obtained from that analysis compared to a growth curve analysis and make sure that information is not being thrown away by selecting that type of analysis method.

In closing, I would like to thank John and Judith. They have alerted our field to some wonderful methodologies. Survival analysis has been used within education and psychology in large part because of their promotion of this methodology, and it has led to some interesting analyses and conclusions. Similarly, individual growth curve modeling, both latent growth curve modeling and hierarchical linear modeling, have been promoted by their work. They have made wonderful contributions. The types of issues that they talked about here are exactly the types of issues that we as developmentalists need to think about as we analyze data.

Hagen: Mark Applebaum was not able to join us today. I did talk with him and wanted to just briefly comment on a couple of the points that he was going to make, and then I will open the floor for some questions. One of his points is something that was said by the speakers, and Margaret just reinforced it. Oftentimes in psychology we have gathered data, and have been too cautious in the analyses we have used. We have been so worried about making an error in analysis that we have not really found differences that are there, or we have not been willing to say much about them.

Another point that Mark makes is that currently we are at the point where our approaches to doing data analyses have made great advances—in fact, they have far outstripped the quality of the measures that we have. It is time we start looking hard at many of the measures that we are using, because they are not providing what they should. Many of us who have been especially interested in contextual effects and in working with populations of children and adolescents who do not fit the white middle-class standard know that there are real discrepancies when we give standard measures versus when we use more informal or qualitative measures. That is a dilemma that we have right now, and it is one of the challenges that we need to deal with over the next several years.

Certainly, there are many parallels between the arguments that Michael Rutter made in his presentation and the types of things that we have heard here. Rutter certainly argued that we need good sophisticated longitudinal studies; we need epidemiological studies. He mentioned a sample of up to half a million in his presentation, which is beyond the scope of what some of us can ever envision. However, we also probably need many of the kinds of approaches that are the case studies in multiple *n*s, and small *n*s as well, which we are beginning to see in the literature.

Question: Would you briefly discuss the distinction between latent growth modeling and hierarchical linear modeling? Can you offer some rules of thumb about when one would use one versus the other?

Willett: There really is no distinction. The models that are being fitted by both of these techniques are the same. In this presentation, we were proposing this multilevel model for change when one wants to investigate children's trajectories of change. Software like HLM, Stata xtreg, SAS PROC MIXED, and MLWin simply fit these models simultaneously to data. In fact, what happens is that the models are collapsed down into a single model and fitted to data under a variety of assumptions, usually by some method of generalized least squares or maximum likelihood. The software is distinguished by the type of iterative methods that are used to create the parameter estimates. What we were using today was what Margaret referred to as hierarchical linear modeling.

Over the last decade as well, in a kind of parallel stream, there has been work from John Tisak, Bill Meredith at UC-Berkeley, Jack McArdle at University of Virginia, Stu Miller, Pat Curran, Bengt Muthen, and others. These are people that came from the world of covariance structure modeling. Numerous researchers have shown that one could use methods such as LISREL and EQS to fit these models. In effect, if one is familiar with the LISREL model, it has a couple of measurement models that allow observed data to be related to their underlying true scores. Then there is a structural model that allows the true scores to be related to each other. In fact, one can treat the measurement model as a level one model and treat the structural model as a level two model. Thus, one is able to take these same models that we were describing today and fit them with these covariant structure models. The methods are identical.

Unfortunately, because the latter methods came from covariant structure analysis, where the notion of latent variables was rather heavily inculcated, the method came to be known as latent growth modeling in the sense that one was modeling something latent. Of course, there was something latent in what we were modeling too. It was the intercepts and slopes. They were parameters. They represented the individual child's beginning and rates of change. These were the latent parameters. Our analyses were also latent growth modeling.

What is the distinction between the two models? Primarily, it is the way that the software is implemented, which is slightly different. Because the software for "latent growth modeling" comes from the world of covariant structure analysis, it has flexibilities that the software that is developed for hierarchical linear modeling does not have. For instance, it is possible because of superfluous measurement modeling covariant structure analysis that one can use multiple indicators of the predictors. One can resolve what is called the errors-invariable problem. One can also manipulate the error structure. One can hypothesize about the nature of the error structure in covariant structure modeling in a much more general way than one can in hierarchical linear modeling. It is not a conceptual difference; it is a flexibility difference. It is also possible with covariant structure modeling to have multivariate outcomes. The work in latent growth modeling has stimulated the designers of hierarchical modeling software to modify their software, so that now one is starting to see multivariate outcomes and a variety of other things starting to appear in that software.

Margaret's point is correct. These are the same methods, but one will find one of them more convenient depending on the setting. The key rule of thumb is: If one has balanced data—every child measured on the same number of occasions at the same times, one can use the covariant structure models without any problem. If one has an imbalance—different numbers of waves on different children measured on different occasions, it is a lot more convenient to use HLM or MLWin. That is not to say one cannot do it with latent growth modeling. Muthen has written papers about how multigroup analysis can be used to solve that problem. The methods are not distinct; their utility differs.

Question: I heard the message that more waves are better, a bigger sample is better, and more methods and more measures are better. Could you give some guidance for designing longitudinal research in a world of finite resources where one cannot do everything? How does one decide how to trade off sample size versus more measures versus more waves?

Singer: There are a variety of ways we could answer that. Certainly one gains precision and power as more waves are added. However, one can also think about numbers of people, numbers of waves, and duration of study. These all operate together. In some cases, one can get away with having fewer individuals followed over a longer period of time; in other cases, one would want more people followed over a shorter period of time.

One of the things that one has to be thinking about in all of these cases is: What kind of model is being postulated? What kind of software is being used to fit it, and what kinds of designs are being used? One has to think about what the model is. If one is positing a model that includes linear change over time, and if one thinks that the types of change the children are going to experience is simple straight-line linear change, then one can use fewer waves of data than if one thought that the children were going to experience some sort of curvilinear change and one would need to model that change over time.

We can make a set of assumptions as when we said more waves will buy greater precision and greater power, but issues about the spacing of the waves, the timing of the waves, the duration of the study, and the number of people are a complex set of interrelationships, which we are writing more about right now. I cannot give a precise answer, but one needs to think more globally about the model and then address those kinds of questions.

Burchinal: It depends specifically on what question one wants to ask, what one knows about that phenomenon, and when one thinks the change is going to occur. One wants to make sure to measure the individuals whenever one thinks the developmental phenomenon is occurring.

As a field, we have tended to collect a lot of data on a few individuals. This may have made it difficult for us to look at some of the kinds of issues we would like to look at. If we have a specific question we want to try to answer, it may be better not to try to collect all the different kinds of data on a few individuals and try to use fewer instruments to collect more data on more people. Make sure one has the power to look at what one wants to look at.

Willett: To make it more concrete, one can do power analyses. There is useful software on the Web. What Judith and Margaret have just said is more directed towards the substance of what one is trying to answer. One can do the power analyses and figure out whether one needs either 100 cases in six ways or 200 cases in four ways, so that one can come to a conclusion about some partnerships. However, what one must think about is what is going to happen. If one thinks there is going to be some jump in the trajectory at some point in time, one should make sure there are data around that point that are sufficient to allow you to estimate the parameters that are of key interest to the research questions.

Margaret's point is to think about children's trajectories. Think about where one expects the impact of the intervention to occur, and make sure to place some data points around that feature so that a change in the slope will be evident. It is the same with hazard modeling. If one thinks that the 3rd year of life is where this problem is going to occur, then one would want to think more carefully about where to put the data points.

Burchinal: Robert Cairns was one of the big promoters of person-oriented analysis, and I should not have mentioned it at all except it seems as if at every meeting I have attended this year, this was the big issue for longitudinal data analysis. Coming out of Sweden, there has been the idea that somehow these kinds of regression analyses, whether they are structural equation models or hierarchical linear models, are not person-oriented because variables are being analyzed. There is also the idea that if one is going to try to look at development what one should do is analyze people, not variables. Most of these methods boil down to doing some kind of cluster analytic analysis to characterize people based on their patterns of change over time. Magnusson has done quite a bit of this work.

My sense in having worked with some of those people is that it sounds wonderful on paper. However, when one actually goes to implement it, it has all the problems of any other kind of cluster analytic method, where what oftentimes one does is throw away the information from continuously measured predictors and outcomes and literally categorize individuals into different groups. It would be a real pity as a field if we went down that road instead of trying to use some of these more flexible methods that retain most of the information in the data we are collecting.

Singer: There are two points that I would make. One is that these methods are individual-oriented. If one thinks about the level-1 model, which is tracking individuals over time, and the level-2 model which is looking at the effects of predictors on characterizations of those level-1 trajectories, the kinds of models that we are talking about here, in fact, do have the individual quite squarely in them. The other thing is that there are two sorts of people in the world: People who put people into categories, and people who do not. That is just a fact of life. If one wants to see the processes that are unfolding as continuous processes, these types of methods do provide that, as opposed to trying to put people into little boxes.

Integrating Qualitative and Quantitative Approaches to Research on Early Childhood

CHAIR: Cynthia Garcia Coll
PRESENTERS: Deborah Stipek, Heather Weiss

Cynthia Garcia Coll: The two speakers and I have shared the last 5 or 7 years as part of a network funded by the MacArthur Foundation, Successful Pathways Through Middle Childhood.

The speakers come from different disciplines. The world of research is in the middle of a paradigm shift. Since no single discipline is finding all of the answers, we have to work with each other. Part of working with each other is trying to integrate methodological questions and ways of looking at data.

Deborah Stipek: The MacArthur Foundation puts together a group of people who have diverse backgrounds and approaches to conducting research. They hope that somehow something new and different will emerge. I can assure you that things new and different are emerging. When Heather and I first started working, we would have conversations on the telephone. She kept talking about Mrs. Jones, and would go on about Mrs. Jones and the school and the principal did not seem to understand what she was talking about, and the child was having problems. I would be thinking, we are conducting a research study; I do not have time to listen to all these stories. Heather was telling me stories about human beings. I kept talking to her about variables, achievement, and constructs—things we could measure in everybody exactly the same way. Initially, our communication was a struggle.

After a few years of working together, Heather now talks about variables, and I am going to tell some stories. The process has been engaging, exciting, and interesting for us once we got over our initial difficulty in understanding each other. It speaks to how our field has been divided. People who use qualitative methods and people who use quantitative work have not for the most part communicated, worked together creatively and equitably, and truly collaboratively. Until recently, many people who conducted qualitative research felt like the underclass or not complete citizens of the world of research.

By struggling together to figure out how to put these different methods together in a creative way, we have both been convinced of the tremendous benefits of mixed methods. By mixing our methods, we understand the meaning of each, and also enhance the value in how we do each. When we get our quantitative and our qualitative data, the other kind of data helps us understand and make sense of what we are doing. In terms of trying to enhance the quality of the research, whether it is qualitative or quantitative, and enhance, make meaning, and have better interpretations of the data, the mix is productive. However, do not underestimate its difficulty. We should not underestimate the degree to which the field is fully prepared to take good advantage of it.

The study we are discussing today is a collaborative effort. We have six colleagues working intensively on this study. In addition, we are part of the MacArthur Network on Middle Childhood, which serves as an opportunity to include another group of people who have been helpful.

The study involves a diverse group of about 400 children and their families. We estimate that about 50% of the children were in Head Start. The children and their families come from three locations: a northeastern rural area with predominantly White children; a northeastern urban area with predominantly African American children; and a western urban area with predominantly Latino children. We have confounded ethnicity and location, but not purposefully: this is America.

The families in this study were included because their incomes were below the poverty line, although a few have transcended poverty. In fact, the sample consists of children from families with very low incomes, and who, for the most part, have low education levels as well. The children are spread out in many different classrooms, schools, and school districts. In some ways, this is complicated because if a study is following children longitudinally in many different schools and school districts, getting approval to do research becomes complicated logistically. However, from an analytic point of view, it is a strength of the study because we are able to look at children within classrooms embedded within schools, and schools embedded within school districts. We have a variety of schools and have been able to look at school and classroom effects that we would not have been able to do if the children were in a more concentrated group of classrooms and schools.

The children and families in this study were either part of the members of the intervention group or the control group of the Comprehensive Child Development Program (CCDP) study, a family intervention program. CCDP enrolled families before the child was 1 year of age. A research study of CCDP collected annual assessments of the children and also a fair amount of data from the family in addition to some medical data from the children's birth. Thus, there was a tremendous amount of data collected on these families from very early on in the children's lives. We started studying the children and families in kindergarten and are following them through the fifth grade. Most of the children are through third grade now. Our first cohort of children just entered fifth grade. In all, we have a longitudinal study of children and families from the age of 1 through the age of about 10, which is unusual.

We have also done intensive data collection, both qualitative and quantitative, at the school level. For example, we have observed every child's classroom every year since they were in kindergarten for half a day or a day and have detailed information on children's instruction, the quality of instruction, and the population of the classroom and the school. We have done annual, and at times more frequent, assessments of the children, including their social development, achievement, and academic development. We conduct annual interviews with the parents. In addition, there are 23 case study families, which we will discuss in more detail later.

One purpose of this study was to examine a relatively large cohort of children from low-income families with diverse ethnic, cultural, and language backgrounds. We were interested in the aspects of their environments and experiences that help them transcend what we might predict for them on the basis of being a high-risk population. Thus, we looked broadly at how different contexts interacted with each other. We examined the child embedded in the school and classroom. We have recognized that even within a classroom we cannot assume that all children have the same experiences. We looked specifically at variables such as to which ability group the child is assigned and the teacher's expectations for that child. We were also interested in how certain children's characteristics at school or grade entry impact the nature of their experiences. We see the child not as a passive recipient of their environment, but as someone who brings a certain set of expectations, skills, and qualities that will influence the way the environment will respond to the child, which in turn will influence the child.

For example, a child who enters kindergarten with low academic skills relative to other children is most likely assigned to the lower reading group. We hope that instruction of lower reading groups is different from the instruction of higher reading groups. Children in that group are most likely to have low expectations on the part of the teacher. Children sometimes have behavioral problems either as a consequence or because of academic problems. That child is likely to have a different experience in kindergarten than a child who enters with relatively high academic skills.

Another dimension we stress in this study is the connection between the home and school environments. In the case studies, parent interviews, and interviews of people in the school, there are many questions on the connections between these two contexts. We also obtain multiple perspectives. Whether in a quantitative or qualitative form, we often ask different actors the same question, although not necessarily the exact same wording. If we are interested in the child's academic skills, we ask the parents' perceptions of their child's academic skills, the teachers' perceptions of the child's academic skills, and the child for his or her own perceptions of academic skills. We share the view that there is not necessarily one reality. There are perspectives and those perspectives have important implications for how people behave toward the child and how the child behaves.

Heather Weiss: The ethnographic component of the study began in part because we were part of the MacArthur Network on Successful Pathways Through Middle Childhood, which gave us the license to experiment. From the beginning, our chair, Jacquelynne Eccles, told us that adhering to traditional methods was the equivalent of failure.

Because there had been an ethnographic component to the CCDP study, we decided to continue it with the ethnographers who had been working on the project. We studied the overall sample at each of the sites, and tried to identify families that were representative of the families at the site. Because we were going to study the families intensively, we needed to trade a large sample size for depth and the continuing contact with these families.

The data collection was intensive. It involved a number of interviews with parents, usually in the home; interviews with the child's teacher and a variety of specialists working with the child; interviews with the school principal; and an interview with the child. We also conducted some participant observation at school events and informal participant observation, or observation in the classrooms. The ethnographers participated in developing the main study instruments as well as in developing the qualitative instruments. They did ethnographic field notes and analytic memos and write-ups of cases for individual children. The data were submitted to Harvard, where we have been entering it on NUD*IST software for qualitative analysis.

One feature of our organization that allows us to bridge the methodological worlds is the license to experiment. Mixed methods stop at the scale at which we are trying to do it. With a study of the size with which we are involved, it is difficult. Having the MacArthur group has been helpful. Second, having a respectful space for mixed method dialogue and mutual respect and tolerance are important. Jennifer Green published a monograph as part of the Jossey-Bass New Directions and Program Evaluation Series on mixed methods and evaluation, which includes a chapter addressing these issues. Third, having a long timeframe is helpful. This is a longitudinal study. To collect data, both quantitative and qualitative, but particularly on the qualitative side, and get it processed takes time. That time is important to the depth of mixed method collaboration we have been attempting.

We have also had mediators. My team at Harvard was a mediator between our steering committee and the ethnographers. We had ethnographers who were used to conducting ethnography and being able to steer their own course, but were now operating within the context of a committee who wanted to steer their course. We would have debates about how structured our interview schedules would be, and how structured our participant observation would be, and my team at Harvard served as mediators between the steering committee and the ethnographers. Similarly, Jennifer has been a mediator at times with Deborah and me, and also with the larger network, many of whom are not familiar with qualitative work.

It was important that we began with a commitment to the mixed methods work. That played out in our first family interview that had a huge number of open-ended questions. Thus, Deborah, who wanted numerous closed-ended questions and scales, agreed to many open-ended questions as well as some closed questions and scales, and I began to see the value of using Carl Dunst's Social Support Scale and a number of other measures.

Stipek: The overall design of embedding case studies into a larger predominantly, although not exclusively, quantitative study is something that I am seeing more of lately. One issue with this design is how to select a subsample of individuals or families for more detailed analysis. We had numerous conversations struggling with the criteria in which to select those families. Several different directions are possible. Essentially, we compromised on many of these different directions.

One direction is choosing families that represent particular kinds of issues, for example, families that do not speak English and children with special needs. It is frustrating for those of us used to large samples, because basic epistemological issues arise and that child can be completely different from most children or the average child. Another approach is to reflect the larger sample. Thus, if the sample is comprised of ⅓ African American and ⅓ Latino, the subsample should have ⅓ African American and ⅓ Latino families. Another issue we considered was determining important variables that might have implications for variability. For example, we considered including children who looked as though they were reasonable achievers in school, and children who looked as though they might have difficulty in school.

Another issue that came out of the open-ended questions is what to do with the responses. This has been a struggle. As a quantitative person, I wanted a number to go into the computer. I wanted to make coding systems with no more than seven response categories.

There are two general ways in which we have mixed methods. One is in developing the methods themselves. We have a few examples of ways in which findings from the case studies informed us as we developed the quantitative measures. We were fortunate to be conducting a longitudinal study. Each time we interviewed parents, we added and reformulated questions. We had the tension between keeping the question the same way to have comparable data each year, even though new information suggested a better way to ask the questions.

For example, we were interested in school-family relationships. I tend to think formal opportunities for parents would be involvement in school, such as the PTA, parent-teacher meetings, programs for parents to learn about their child's curriculum, and back-to-school night. The case study interviews revealed that in most families, many of the connections they had to school were informal. In fact, they were not necessarily taking advantage of the formal opportunities to be involved in school. With this information, we tried to shore up the interviews to ask more questions about these informal connections.

At times we found that our questions were asked in the wrong way, or they needed to be clarified. Latino families were reporting attending seven or eight teacher-parent conferences a year. Through the ethnography we realized that many of these families were interpreting a conversation in the hallway with the teacher as a parent-teacher conference. We clarified our questions because we realized that the answers in the quantitative data were meaningless because some of the families were interpreting it in a different way than we had meant it.

Another issue identified through the case study interviews was the degree to which parents thought about children's own responsibilities for schooling. We asked many questions about the degree to which the parent felt that the parent was responsible for aspects of the child's learning. We were trying to get at the finding in the literature of parents with low incomes being less involved in the school, which comes from a perception that education is not the parents' job, it is the teacher's job. Who is responsible that the child gets his homework done? Who is responsible for ensuring that the child gets to school on time? In the case study interviews, the parents reported that it was not the parent or the teacher; it was the child's responsibility. They would explicitly talk about the importance of giving children responsibility. Again, we had to modify our questionnaires to ensure that this was an option for which the parents could provide information.

Quantitative data also informs the qualitative component. The ethnographers read the quantitative data before speaking to parents, teachers, and principals. They were informed by the quantitative findings, including the children's achievement and the teacher's ratings of the child's social skills and motivation in the classroom. This information was useful in targeting some of their questions. For example, one finding from the quantitative analyses was that principals, when asked about opportunities for parent involvement, claimed more things than the parents claimed were available. We needed to understand why parents perceived less to be available in the school than the schools seemed to think they were providing, which we pursued in the case studies. The mixed methods approach is useful in interpreting and understanding the data. Quantitative and qualitative components increase the value and the quality of each other.

Weiss: In terms of the selection of the families for the case study, one important factor was finding families willing to go under a lens as part of the case study sample. That is one variable that often distinguishes quantitative and qualitative research. Qualitative researchers are intrusive, and some people are willing to do that and some people are not. The reality of who is willing to engage in this intensive way is also something to consider and brings its own biases.

In addition to the qualitative informing the quantitative, the quantitative helped us sharpen our questions. Deborah constantly insisted that we have a good rationale for our questions that helped us achieve clarity as to why we were pursuing a topic. The forced discussion and constant clarifying helps in the interpretation of the quantitative data. It made us clearer and sharper in our pursuit of the qualitative data.

Because of the back and forth, we obtained in-depth information on a variety of topics. For example, there were substantial differences on special education placement in the multiple schools at each of the study sites. One site will do anything to avoid labeling and placing a child in special education. All the people that work with the children in the elementary school will hold a case conference on a child with a problem, and handle it out of the special education system. In another place, they will not place children in special education for a totally different reason: the expense. Children stay out of special education for a different set of reasons.

In the main study there was a willingness to open the possibility of some qualitative work as well as in the case study. While we have gained insights by having some open-ended data, we are still struggling with what to do with all of it. We have coded it question by question. As we go into that data and look at the main study data for the case study children, we see all that is lost by coding question by question. Families may not answer question one in response to question one, but may provide relevant information to question one on question three. We have yet to sort out these issues.

We are in the process of data reduction and analysis. I would refer those interested to an article Jennifer Green wrote in 1988, "Toward a Conceptual Framework for Mixed Method Evaluation Designs." This work is some of the best in looking at the reasons for doing mixed method analysis, and how to conduct it.

Her theoretical framework includes five purposes for mixed methods work. One is triangulation, to get at a convergence of findings. We have examples of that in our study where the qualitative reinforces the quantitative. A second purpose is complementary, in which the research tries to elaborate, enhance, illustrate, and clarify results from one method with another. We have many illustrations of that in our parent involvement work and other subject areas. A third purpose is development, using the results of one to inform the other and continue to develop the study. We have discussed the way in which some of the qualitative data helped develop the quantitative interviews and vice-versa. It is a two-way arrow.

A fourth purpose is initiation: the discovery of paradox and contradiction, new perspectives or frameworks recasting the questions. For example, parents reported no multiple entry points for parent involvement, but the principal reported there were. The principal saw the PTA, parent-teacher conferences, and so forth, as opportunities for parents. However, many parents do not see them as opportunities. In the schools in which we did our ethnographic work, PTA members are White, middle-class parents. It is not a viable opportunity for parent involvement for many of the parents in our study. A fifth purpose is expansion, expanding the breadth and the depth of the inquiry by using different methods in the inquiry components. That has been true in our parent involvement work, and will continue to be true as we press on with our analysis.

Currently, we are in the process of data reduction, coding the data on NUD*IST. As the data were coming in and we were looking at the ethnographic work, we began to see the importance of work for parent involvement. We looked at the literature and found that often parents' work is seen as a barrier to parent involvement. In the case study, we asked families how do working poor mothers negotiate work, family, and school involvement, and what school and work conditions impede or support these parental negotiations?

We saw the complex ways in which people talked about work. They talked about work as an asset. A number of parents use work as the child's after-school care. The child comes to the parent's workplace after school. A number of mothers reported employers who were comfortable with the parent using the telephone during the day to call school, or using the fax machine to send the child's homework. We saw more complex relationships between the family and work, and in many cases the mother's desire to be involved in her child's school and learning. We also found that work status is adversely related to attendance at parent-teacher conferences and inversely related to communication over the school year. Mothers who work fulltime are least likely to attend conferences, followed by those who work part-time. Those looking for work or not working are most likely to attend conferences at about equal rates.

For the mothers who work, there is a strong negative relationship between hours worked per week and involvement of all types at school. Teachers recognize this and reported, in the main study, that one of the biggest barriers to parent involvement is the work schedule. At the same time, we knew from the case studies that many of these families reported as not involved, because they do not use conventional entry points for parent involvement, are in fact very involved. They call the school on a regular basis, talking to the child's teacher, and write notes. This finding forced us to reconceptualize our definition of parent involvement and how we measured it.

Early analyses from the case studies showed that work can support children's learning. There are a number of parents who bring their children to work after school. There are a number of employers who support constant communication. There was a mother very affected by shift work. We knew the child was having serious problems in school. The teacher and specialist both attributed these problems to the fact that the mother was never home because of her work. All of the people in the school worked together in a case management style to try to help. In the end, the teacher wrote a letter on the mother's behalf to the mother's employer noting that the shift work was jeopardizing her son's success in school. Soon the shift was changed.

We have numerous stories of the ways in which people negotiate with the workplace, sometimes with the help of the school, sometimes not, that provide a more complex picture about the relationship between families, work, and parent involvement. Our initial observations suggest that maternal agency is key in maximizing home, school, and work connections. We are in an era in which everybody has to work. Every mother, with a few exceptions, is going to be negotiating these home, school, and work connections with welfare reform.

Our hypothesis is that a sense of maternal agency is key in successfully linking these worlds. The conditions that support maternal agency include the mother's comfort level in the child's school and with the child's teachers, the mother's beliefs about parenting and working in partnership with schools for the child's learning and development, and participation in family support programs. Many of the cases in which we are seeing this kind of maternal agency are people who participated in CCDP, which included a focus on fostering maternal empowerment.

We also find with these mothers that their strategies are supported by one close relationship with a school or work person. The mothers' strategies seem to be personal and informal. They are drawing on relationships rather than on institutionalized or structural supports for parents. They are not going to the PTA; they are using informal communication. They are building relationships with the teacher that allow them to write as opposed to talk to the teacher at the parent-teacher conference.

Stipek: We are grappling with what is mixed methods with respect to data analysis. Mixed methods is not new. Many people have been doing this for many years. There are many examples of ways in which qualitative and quantitative methods have been included, but typically have been included in limited ways. While this is a powerful and useful tool, it is not particularly creative. Another way mixed methods is commonly used is doing qualitative work at the beginning to identify the research questions, and then the quantitative researchers conduct a larger-scale study. Thus, the qualitative research is the groundwork.

We are struggling with creative ways of mixing methods in a powerful, dynamic, analytic way. One strategy is to read across cases using both the quantitative and the qualitative data. We choose a group of children or families and look both longitudinally and across the data. We have many data sources to examine. The other strategy we have been considering is selecting children on the basis of the quantitative data and then using the qualitative data to try to understand what is happening in the quantitative data. For example, we have been looking at children with various trajectories. We have selected children who have, over their years in elementary school, started out fine but then showed a downward trajectory. Some essentially stayed constant while others did not appear as though they were going to do well but managed to succeed. With these children, we would then go to all of the data and try to understand something about these different groups of children and what put them or kept them on a particular trajectory. This is something that could not be done with only the qualitative or the quantitative data.

Lastly, probably the most profound effect of working with ethnographers was being forced to listen to tapes of conversations with parents. From my quantitative research, I can tell you something about what happens to poor children and families. However, reading the interviews and listening to the tapes has put a human face and made the work much more meaningful and profound. It has had a major effect on me as a researcher.

Weiss: Also, NUD*IST is interesting qualitative software with the potential to link to SPSS. We are trying to find technology that will enable us to do mixed methods more easily and that is facilitated by the software.

Coll: One side of research is ethnography, focus groups, open-ended interviews, participant observations, and case studies. The other side is surveys, structured observations and interviews, with standardization and large samples as major criteria. It tends to be more superficial and variable-oriented. One problem is that we were trained in one or the other. Hopefully, training programs that are preparing students will ensure that future researchers are more comfortable than we are in going back and forth between focus group data and an interview.

To a certain extent, we have realized that our methodological biases and lenses have simplified something that is complex. Life and development are complex. For research to be able to accurately capture that complexity, it needs to use many methods. I am also struggling in the project that I have from the MacArthur Foundation in the same way. We go back and forth. We now read the entire interview, which is insightful to see the whole child and family in the context of the classroom. After examining those pieces, we look at the quantitative data. We still have to address how to write the findings.

Question: Do you have any advice on writing and disseminating the mixed methods findings?

Stipek: That is a major issue that we are addressing because we have recently obtained a corpus of data to analyze. A couple of the examples I gave are a little different from what has been done before, for example, describing case studies using quantitative information.

Whatever article we write, we will explain that the cases were selected on the basis of quantitative numbers and that we are using both quantitative and qualitative information to try to differentiate the groups. I envision the results section will have sections on quantitative data, sections on qualitative data, and sections in which both are discussed. However, it will be integrated in the sense that we use both kinds of data to answer the same question, or clarify a difference between the groups of children. It will be a major struggle because we do not have models to use as examples.

Coll: In Providence, we meet on a weekly basis. We have weekly assignments such as examining the quantitative data on school engagement and also looking at the case studies. Thus, the team members, including the ethnographer, the demographer, the students conducting the interviews, and myself, are talking about the same outcome or phenomena from different perspectives.

Question: Could you discuss what that interface between NUD*IST and SPSS might look like?

Coll: We found a connection that one can make between NUD*IST or similar software and SPSS. Our programs put together the quantitative numbers for each of the children plus the qualitative data, and whatever analysis we do with that qualitative data is part of the same data set. Our data set is completely linked. When we decide exactly on the NUD*IST analysis in terms of content analysis, those variables will be added as a part of the data set.

Weiss: For our pathway analysis, for example, we are going to try to pull out children that are on a downward trajectory. For those children, we could have open-ended questions done in NUD*IST and have them immediately available.

Stipek: It is very labor-intensive because there are huge interviews that have to be gone through by hand. One has to create a system of themes that are hierarchically organized and that reflect all the interests of the team, especially a multidisciplinary, multiteam effort. Someone has to go through by hand and create the themes and code the text according to those themes. For example, I was interested in retention in age of entry. I can look at the numbers in terms of the achievement of children who entered schools at different ages. I can also add that I want to look at particular themes like retention, and look at everything parents, teachers, and school counselors reported related to the topic of retention for a particular child.

It is going to raise new conflicts and issues in the collaboration. We have already experienced the tensions in different epistemologies. When we start drawing conclusions, we are going to get into issues of reliability and validity and the degree to which we can extrapolate from five case examples. We have not had to address those issues yet. The packaging and the interpretation of the data is going to raise a whole other set of issues.

CONVERSATIONS WITH CYNTHIA GARCIA COLL, GLORIA JOHNSON-POWELL, SPERO MANSON, AND SUZANNE RANDOLPH

The Importance of Context for Good Science

Suzanne Randolph: We are going to have a conversation that illustrates the importance of context for good science. We also want to learn from participants about the lessons learned from your research. What can you tell others about your experiences with context and its importance for good science? First, did any of the panelists have any points to make when time ran out at the plenary?

Gloria Johnson-Powell: I discussed the cross-national study of perceptual cognitive development in children in four cultures. However, I did not discuss the results or much of the methodology. Essentially, the results were explained by the context in which these 4- and 8-year-olds in each of these three cultures lived. We eliminated the site in South Africa because of political problems the area was experiencing.

We examined specific perceptual cognitive skills, such as visual memory, visual discrimination, auditory memory, auditory discrimination, and audio-visual integration. We completed vision and hearing screenings on all the children. We also looked at the pigment of their fundi because some literature suggested that visual perception was mediated by the amount of pigmentation in the fundi. We also took height and weight measurements. In St. Kitts, in the East Caribbean, we identified well-nourished and undernourished children of lower socioeconomic status through a nutritional survey that included biochemical measurements and head measurements.

In the middle-income White and African American sample in Los Angeles, there was not much difference between the 4-year-olds or the 8-year-olds in both ethnic groups, except that the 8-year-old African American children's auditory discrimination was not as good as the White children's. It seemed that as the African American children grew older, their auditory discrimination capacity did not grow as much as the White students' auditory discrimination capacity. The difference was slight, but it was there.

In St. Kitts, we found that the well-nourished, middle-income children were doing far better than the lower-income children. The lower-income, well-nourished children were doing slightly better than the lower-income not-as-well nourished children. What was striking in the lower-income sample was that boys were scoring higher than girls, while most studies show girls doing better. In the middle-income sample, girls were doing as well as boys, but not excelling. In the U.S. sample, girls were excelling in all measures.

In Enugu, Nigeria, one of the tests that we used for auditory discrimination used sounds from the native language. They have minimal differences between tonal sounds. I did not think I could administer the tests because I could not distinguish between the sounds, but neither could my colleagues, so I administered that test. The Enugu children in Eastern Nigeria had such superior auditory discrimination that the scores were off the scale, as were their auditory memory, visual memory, and auditory visual integration scores.

It surprised us to find in the Eastern part of Nigeria a group of children who surpassed U.S. children, both African American and White, as well as children in the East Caribbean. However, we found a group of African children in Eastern Nigeria who were excelling. We are still trying to explain it, but it is obviously context, related to the structure of their language and the tradition of drums in hearing sounds. The performance of our African American middle-income children, even though they were middle-income, was not as good because of housing segregation. They lived closer to airports and highways where there was a great deal of noise pollution. Their results were dependent on the context of their lives. Even though the African American children were from middle-income backgrounds and had parents who were teachers and lawyers, there were still more stresses on African American middle- and upper-middle-income families in Los Angeles than there were with White families.

It was telling to see that despite events happening within the African context—the Biafran War, the restructuring of the Nigerian economy, rebuilding Enugu, and the loss of family members and social networks, these children were doing well in their cognitive and perceptual development.

Question: What were your measurements for nourishment? How did you decide which people were nourished and which were undernourished?

Johnson-Powell: We took total protein and looked at globulin and alpha globulin. We also looked at the electrolytes to ensure children were not dehydrated. We measured height, weight, head circumference, and arm circumference. We also had medical students review the birth records of all the children to look at their initial height and weight at birth, head circumference, and whether any children had been high risk in terms of APGAR scores. We had a complete picture of the biochemical and anthropological measurements of the children at St. Kitts. That was the only site in which we measured nutritional status.

Cynthia Garcia Coll: I want to bring up the use of standard measures in research. One woman stated that the use of standard measures was required by federal legislation in many programs. In order to get funding, researchers must administer standard measures of linguistic development, developmental outcomes, or family functioning to determine whether the interventions are working or not. How do we know whether or not standard measures are valid for a particular population?

I wanted to ask that question in terms of Native American children because in a study that I am conducting with Dominican, Portuguese, and Cambodian children, for example, the pilot tests demonstrated that some of our questions had to be rearranged in order to have similar constructs. We still have doubts, but we are conducting extensive ethnography to understand any differences that arise among the three groups. What else do you do in your work to address those issues?

Spero Manson: I have several examples. First, typically, federal requirements in terms of uniform standardized sets of measures are minimum requirements as opposed to maximum. We usually add to them to enhance our data. The issue arises of how to add to them or how to modify or adapt the measures in ways that make sense. Researchers have a variety of qualitative methods available to add to traditional measures, including ethnographic studies, key informant interviews, focus group techniques, and so forth. We also have the challenge to demonstrate empirically what the added value is of these adaptations.

We use the Composite International Diagnostic Interview (CIDI), a highly structured psychiatric diagnostic interview intended originally for diagnostic purposes. The Diagnostic Interview Schedule for Children (DISC) is an equivalent measure. In the CIDI depression module, there are two screeners that reflect the basic criteria for major depression. A respondent has to endorse one or the other before moving into the full module of depression. The first screening question is: "Have you ever had a period of 2 weeks or more when you felt downhearted, sad, blue, or depressed?" The first problem is that those idioms of distress—downhearted, blue, and depressed—do not translate well culturally.

The second question is: "Have you ever had 2 weeks or more during which you felt you have lost pleasure in things in which you normally take pleasure? This is to identify anhedonia, a loss of pleasure. Our work has suggested that this may or may not operate in Native American communities. However, we have identified other kinds of idioms that may function in an analogous capacity. From a key informant, linguistic interviews, and participant observations, we found the metaphor of loneliness to be an extremely powerful identifier that functions in the same fashion as do these other two screeners. We consider that a cultural analog, but then the question becomes, what do we do with it? We added it as a third screener into the depression module. A respondent can move on to the full module if they endorse at least one of the three. Using this, we can calculate prevalence rates of major depression dependent on standard CIDI criteria.

Another example involved posttraumatic stress disorder (PTSD), an important set of life experiences in our communities. The CIDI criterion addresses intrusive thoughts, specifically a foreshortened future. That is not appropriate to ask in Native American communities. The way in which people express that is "I live from day to day." First, we asked the standard CIDI question: "Have you ever had a period of 2 weeks or more during which you felt that you had a foreshortened future?" Next, we asked two cultural analogs.

If the CIDI standard question is asked first, in this particular population, a prevalence rate for PTSD of about 16% is obtained. When the prevalence is calculated with the cultural analogs, the result is a rate of 30%. When the CIDI standard is compared to a clinical reinterview subsequently administered called the Structured Clinical Interview for Diagnosis (SCID), a cap on a coefficient of agreement between the two of about 61% is found. When the cultural analog is added to determine the degree of agreement with the SCID, the degree of agreement increases to 82%.

Researchers have to be thoughtful about modifying instruments. If we simply modify the items based upon what we believe to be relevant, we need to preserve the opportunity to demonstrate empirically the difference the change makes. It is a powerful empirical argument for those who would say we should not change an instrument based on the assumption that there is something intrinsic to the items.

Johnson-Powell: In practicing child and adult psychiatry in East Africa, the students we saw did not express depression the way students do in the U.S. They talked about their brain being tired and not being able to think clearly. They called it the "brain fag syndrome." The literature points to great differences in the ways various cultural groups express depression. It is necessary to adapt instruments if researchers are going to find true rates of incidence.

Examining children becomes even more difficult. For example, a study in Puerto Rico of children with pathologies indicated that 50% were in need of services. However, when the researchers used the Child Global Assessment Scale (CGAS), they found fewer children in need. Researchers have to make adjustments across cultures as to how emotional states are expressed.

Manson: This also extends to risk and protective factors. We have worked for about a decade with Native American Vietnam combat veterans about the experiences they had during the war as well as in returning home. Our key informant in ethnographic interviews elicited the notion of the warrior way. These are tribal cultures that have warrior traditions. Through key informant and focus group sessions, we elicited this construct, identified its essential features, and cast it into a series of pretests. We began with about 10 to 12 items and through psychometrics narrowed it down to about 6. We piloted it and examined it as a mediator and moderating variable between combat exposure and subsequent risk for PTSD.

We found that veterans who had a strong sense of being warriors, but whose experience in Vietnam did not allow them to enact the social role of the warrior because of the nature of the atrocities during the war, were at greater risk for PTSD than those who had less discordance between the ability to enact that role in their life experience.

The instrument explained about 14-15% of the variance that had been unexplained. This example illustrates that until researchers seriously take the challenge of articulating the local construction of people's experiences and operationalizing and introducing them into our models, we will be trapped within the theoretical frameworks that we typically adopt initially to inform our work.

Question: You mentioned adding a culture-specific notion to standardized interviews. Could the order be reversed so that we ask a culture-specific question first and then add the structured interview?

Manson: First, that would contaminate the measure. Second, the added advantage of adding the culture-specific questions after the standardized items is that we are then following the model set forth by the interviewer instructions, which provides additional guidance about probes or questions to ask in special circumstances. We are following that model, but making it explicit and doing so in a standardized way in the interview protocol. If the question is asked beforehand, it runs counter to the interview guidelines and may create more problems. At times, it is wise to take the line of least resistance.

Question: As a student, I am often faced with having to challenge a research design. What is your philosophy when a student challenges a design because of the need to look at context?

Randolph: I constantly encourage students to challenge research because that is the way we all will grow. I grew up in a neighborhood similar to the kinds of neighborhoods that I am researching. Even after seeing the data collected, the results can surprise us. However, if we do not question the design, then we leave the setting unprepared, underprepared, or maybe even miseducated. There is always something more to be learned. However, one should not only challenge, but be prepared to offer an alternative and to do the research.

Question: What advice would you give to new researchers in terms of the type of research designs we should employ and the type of research questions we should ask in order to build on existing knowledge? What should we do so that we can avoid repeating mistakes?

Johnson-Powell: My colleagues here went to graduate school to learn research methodology, but I had to learn through experience while I was a medical student. During my junior and senior year of medical school, I decided to do a national study on the effects of school desegregation. I was awarded a grant to begin the study and conducted a pilot study. First, I read everything written about the psychological development of children and school desegregation, although not much was written at that time.

I decided to explore ethnographically what I thought children might be thinking and asked a series of questions with a group of White children and a group of African American children. The first question was: Who is the President of the United States, and how would you describe him in three sentences? The second question was: Who was Ralph Bunche, and how would you describe him in three sentences? The last question was: Who are you, and how would you describe yourself? Overwhelmingly, race was the classical characteristic that defined African American children. They mentioned the race of each of the three people, including themselves. However, the White children identified occupation and so forth, although the first thing they identified about Ralph Bunche was that he was African American.

I decided not to ask any questions about race or racial attitudes because that would be too obvious. We decided on a methodology of using self-concept measures. Our sample included six cities: three in the South and three outside the South. Each city had at least five schools: one that was all African American, one that was all White, and three that were desegregated.

I did not get funding from the private foundation to continue the study, but the professors at the Department of Psychiatry at UCLA gave me money to go to Nashville. The statistical analysis was done with the help of the psychologists and statisticians in the department. Because of that help and because of the input of many mentors who taught me research design and everything else, the first book was published the first year out. That was my experience of figuring out how to conduct a study and critiquing earlier studies. I discovered the limits of certain methodologies and the kinds of issues that had not been examined.

Coll: I have always tried in my work to use some standard measures and some measures that are created because of the limitations of the standard measures. From focus groups or from working with the children and/or their families, we realized that standard measures often missed important constructs and that mix and match is extremely important in our field because then researchers can speak to the limitations of the standard measures. The field can move to consider the missing constructs. We can use the same methodologies to a certain extent in creating a new measure and examine its internal validity.

We now have measures for how children feel about their skin color and what happens to these feelings over time. We have measures of perception of discrimination from adults and from children. We have measures of perception of anticipated discrimination versus experienced discrimination, and those measures give us different kinds of findings. Those measures are administered at the same time as anxiety and depression measures for the parents. We also have acculturation measures. We have a mixed bag of using both standard and new methodologies that augment the data. The mix makes it easier for reviewers and other audiences to understand why we add these instruments.

Another approach is to create an entirely new world. There is value in that too, but I want to change the mainstream conceptualization of these families and children. I do not want this knowledge to be marginalized. It is important that our findings are published in mainstream journals and books. If not, then the "chapter 13 phenomena" occurs where culture and context are relegated to the end of the book as opposed to being interwoven throughout.

Manson: I have four specific points. First, find and maintain a senior mentor. Second, remember that a problem well stated is a problem half solved. Put energy into the statement of the nature of the work that one wants to do and the problems that follow from that. The third relates to efficiency of effort. Do not get into three or four different fields at the same time. We are tempted to get pulled in many different directions, but we should try to capitalize and build upon our previous work. Finally, I recommend the book *How to Succeed in Academics,* which covers establishing personal goals, tracking one's career, selecting a training environment, and mentoring. It also addresses selecting a position in academia, choosing a department and institution, selecting grant opportunities, writing a grant, and preparation of abstracts for scientific meetings The authors are McCabe and McCabe, and the book is published by Academic Press in 2000.

Johnson-Powell: One of my mentors in child psychiatry taught me the importance of saying, "No." No one can be everything to everybody. One needs to know how to structure one's time and attend to the task at hand, whatever that may be. I have always given young physicians and graduate students that same advice.

For those of you who are minorities, remember that one cannot resolve every problem that arises. One will want to and can be helpful, but within the limits of recognizing that it is extremely important to succeed, which requires staying focused on one's goals.

Question: Could you please expand upon the Americanization phenomena to which speakers alluded to in the plenary?

Johnson-Powell: More research is being conducted on immigrants. Hernandez' work on trends in the well-being of immigrant children in the *1998 Trends in the Well-Being of Children and Youth in the United States* has a special section on immigrant children. He reports data illustrating that the first and second generations of immigrants fare fairly well. However, the academic achievement of third and later generations declines. In addition, high-risk behaviors increase for some groups more so than for others. For example, it is high for Filipinos compared to other Asian groups. High-risk behavior is also high for Latino youngsters. It is more complicated to determine for African Americans because he does not disaggregate the West Indians and the African immigrants—he subsumes them all in the third generation. In subsequent generations, there is this Americanization phenomenon where children turn off from school and academic achievement. However, certain subgroups within the Pacific Asian group seem to be maintaining their academic achievement over some generations.

Coll: Originally, this phenomenon was called the "immigrant paradox." It was discovered in national studies on birth weight, which found that women who were supposed to be very high risk, because they were less acculturated and poor, recent immigrants, were having infants with less complications and higher birth weights. A similar pattern has been emerging in mental health and now in education.

Most of the hypotheses theorize that immigrants acculturate to a certain lifestyle, which may include smoking, drug addiction, and less social support that is detrimental to their well-being. There is something about the native culture that has given people an envelope of health and protective factors, irrespective of the notion of poverty. This is the paradox that people are talking about. However, we do not understand on a deep level what is happening.

Johnson-Powell: The school desegregation data that we collected in the six cities—three in the South and three in the North—showed that the African American children in the all-African American schools in the South had the highest self-concept. At the same time, Sewell conducted a study of patterns of African American excellence, which showed that 65% of all African Americans who had advanced degrees in the late 1960s and early 1970s graduated from all African American high schools in the South and all African American colleges. The record of African American excellence from African American high schools and colleges surpassed those of us who attended Ivy League schools. Gurin and Epps conducted a study of African American young adults attending all African American colleges and, again, found that years later they were achieving better than many African Americans who had gone to school in the North. They were the leaders in their communities.

In the school desegregation study, we conducted interviews that included questions about high-risk behavior. At that time, in the South, African American families were staying close to one another. When I visited Nashville, for instance, they closed all the African American schools one day because the teachers, parents, and community leaders were going to the Poor People's March. We never did that in Boston. There was something about that kind of environment and community life, where citizens were all striving for the same moral and ethical principles, that reinforced who they were and what they were all about.

The mores and values of the home were reinforced in the school and in the communities in which they lived. In the all-African American schools, the pictures of the heroes on the wall were African American. An African American girl could have the lead in the school play. In the desegregated schools, African American girls had the lowest self-esteem of any group in the nation. The self-esteem and self-concept scores were lower for the African American children regardless of the academic achievement or socioeconomic status of their parents as compared to Whites.

Question/Comment: It seems that the Americanization of second and third generation immigrant children plays a major role in their development. Is this because of a lack of bonding or identification with their culture or ethnic heritage? For example, English is a second language for my father. The further away the generations move, the children have a language barrier and cannot link to the family because they are in the American society and have American values. Also, the children may feel alienated from their families because they are bicultural. It is not so much becoming Americanized, but rather more of the gap between one's self-identity and what their family represents.

Johnson-Powell: When children become adolescents they have choices to make about their identity. Part of the separation from parents in terms of forming one's own identity is healthy. Researchers are concerned about academic achievement. For West Indian immigrants, and other minority groups as well, the issue is not just moving away from one's culture, but also perceiving that one cannot achieve a desired status in the way that society is structured. One finds that upward mobility is blocked at times by the race-relations problems in the U.S., particularly for Latinos and African Americans where there is much stigma.

Waters' book on African American identities, West Indian immigrants, and families is powerful because she examines the research on West Indian immigrant children and families and how well they were doing, but the third and subsequent generations are falling by the wayside. She discusses race relations and the barriers they find to achieving success.

Researchers have found that Asian students do not accept the fact that school achievement is based on luck or ability. They believe hard work is the key to success; one has to study hard and work hard. As generations of other immigrant groups become more Americanized, they attribute success more to luck and ability and that the "American Dream" is around the corner and involves luck. There are shifts in internal and external locus of control. Asian immigrant children, on the other hand, adhere to the belief that it is hard work.

Manson: Our discussion has covered mastery and control, the intergenerational transmission of values and ethics, the differential access to opportunity structures, and stakeholders and commitments. The challenge is to transform those insights into investigable questions.

This reminds me of a visit to Barrow, Alaska about 15 years ago to conduct a day-long consultation. I got off the plane and several of the local native people ran up to me and said, "Dr. Manson, we are sorry but we cannot do our workshop today." I asked, "Why not?" They replied that a pod of whales had just come through and that they were about to catch one for subsistence. I was able to join them. We went out on an umiak to the sea and participated in the whaling. They caught a 13-ton great whale. They put a big block and tackle in the ice and around the tail, and we winched it onto the ice. I sat there looking at this great whale and turned to an older native woman next to me in the umiak and asked, "What are you going to do now?" She answered, "We are going to just cut it up one piece at a time."

As researchers, we have to think about how to go in and begin to cut up our questions one piece at a time, so that they become manageable. We then begin over time to assemble those pieces as they make sense in a coherent fashion.

Question/Comment: I am interested in early childhood development in the developing world. There seems to be a debate about what the ideal outcomes are for children in the developing world. Do you have any thoughts about that? How should we go about trying to export knowledge from the U.S. and other industrialized countries into the developing world?

Johnson-Powell: If we start with the premise that we from the developed world have more to give to the developing world and less to learn from the developing world, we begin with a paradigm that can become problematic. I am going to piggyback on the work of my ex-husband, who was the Director of International Child Health for Africa. We found that there were certain practices in the developing world that were protective factors. When we brought in technology from the developed world, we disrupted certain protective practices. For instance, the issue of breastfeeding and bottled milk started a wave of gastrointestinal disorders and children dying.

As public health specialists, we had to reeducate families in the developing world about the safety of breastfeeding and demystify being Westernized by having a bottle of milk. Many families did not have the capability to provide the storage for the bottled milk, which is a carrier of bacteria. People were trying to become Westernized in the developing world but getting diseases and disorders that were more complicated, because they were trying to move too far ahead. Some of their native practices were more protective.

Secondly, we have tried to create in the developing world the kind of medical structure that we have in the U.S. and Great Britain. We have found that it does not work because most developing countries do not have the infrastructure that we have to maintain those kinds of systems. One of the initiatives around the world is training paraprofessionals. Few countries could afford to train medical physicians the way we do here and in Great Britain. Trainers looked at the specific competencies of a physician and a nurse practitioner and began to train village workers in specific competencies.

One of the reasons that the incidence of death from dehydration in tropical Africa decreased is that instead of training physicians who would send everybody to the national center to be rehydrated with I.V.s, public health officials mixed sterilized water with necessary ingredients and trained the village workers to go house to house with a medicine dropper and rehydrate children. We often begin with notions about how to intervene, but have to learn the culture and the context in order to provide the intervention strategies that will work in the long term.

Also, when one upsets the balance between a person's cultural ways of operating and introduces new technologies that do not fit in, it does not work. We built hospitals in Liberia with the latest technology, but built them in the corridor with the wind from the sea, and within 5 years the machinery was corroded. We have to be careful about the transfer of technology.

Coll: I come from a developing country. Puerto Rico went from being an agricultural island to being completely industrialized in 20 years. The U.S. was going to bring this underdeveloped culture to a big view of the world. Interestingly, at the time, infant mortality was lower and the longevity was better in Puerto Rico than in the U.S. There has been an incredible toll on people. Now, the rate of violence in the biggest cities in Puerto Rico is worse than in New York and Miami.

Many of the interventions came with a high cost. My sense is that anytime we intervene in people's lives, whether they are in Washington, DC, South Providence, or New Orleans, we have to recognize that systems are dependent on each other. Anytime that one part of the system is touched, there are ramifications.

When we empower women, what happens to relationships between women and men? Women should be empowered, but in a way that takes into account systemic aspects. When infant mortality is reduced, for example, overpopulation is created. There are many examples. The United Nations children's rights are noble guidelines, but their operationalization in each country needs to be individualized to determine what makes sense within indigenous cultures.

Question/Comment: For a number of years, I have been working on national studies of Head Start, including the Family and Child Experiences Survey (FACES). I agree with the idea of examining context and looking at data within the context, but it is a struggle when we are collecting data in programs all over the country with a limited number of children in each program. There are cost restrictions. I struggle with how to collect information on context when there may be a group of 10 children at a site in a sample of 2,400. Do you have any recommendations about how to integrate the two?

Coll: I suggest administering the overall assessment to the entire sample and then conducting in-depth studies in each of the sites or regions—the notion of mixed methods. For example, in a study of the Comprehensive Child Development Program, there are three sites that assessed all of the children, about 500 children, from birth to fifth grade. The children are assessed once a year. Within each of the sites, there are 20 to 30 families that are studied in-depth. The surprising findings of the first waves are guiding the in-depth studies and vice-versa. It is a reiterative process. To do this work correctly, researchers need a large sample and then a smaller sample that is studied more intensively using ethnography and open-ended interviews. Meanwhile, the quantitative and qualitative teams need to communicate to each other. A few national studies are using this strategy. It is more work, but will provide a clearer picture of what is happening with the children and families.

Comment: In FACES there is a substudy in which we examined 120 families and have in-depth data. However, it also becomes costly to complete the analysis because it was time consuming.

Coll: We need to have the wording in the legislation that appropriates the funding to say the measurements have to consider the context and context has to be measured. That way, research will have the funding to study the issues correctly. Another approach is to encourage students to pursue dissertations in conjunction with larger studies. For example, in the New Hope study, our students became ethnographers and part of the research. Researchers also need to talk to private foundations, as they tend to be more interested in this kind of work. We need to start seeking resources from different strands and not only rely on the federal government.

Comment: To follow up with the issue of mixed methods, at times, I look for preexisting data to help with context. I look at population density measures available from states that are based on county-level data. I also look at workforce employment rates. Other data may be available regarding early childhood policies in a state. For example, many Head Start programs are not full day/full year yet; many children attend other child care programs. There might be differences between regulations across states. Sometimes researchers can obtain contextual information through available resources, which is less expensive than collecting it.

Coll: We are conducting a study of children in Providence using school data. We are mapping children's lives with respect to resources in the community. By putting in children's addresses into the systems, 75,000 variables become available. That many are not necessary, but creating an index of supports or expenditure per child in a particular neighborhood is possible. Additionally, crime statistics or other variables that conceptually make sense are available at no cost.

Comment: My comment relates to maternal depression as part of context. I participated in the Head Start Public School Transition Study as a local research director for New York City. In the national evaluation, they reported an incidence of depression of about 40%. In New York City, it was higher than that, which was disturbing. Yet when I brought this to people's attention, they were not surprised that low-income mothers were depressed and did not seem to consider it throughout the analyses.

Randolph: In our study of low-income mothers in high violent neighborhoods, we found a similar rate of depression of 40-45%, which we also thought was high. However, our discussant said that that was similar to national data.

Comment: To me, depression is part of the context. If research is examining family and child interactions and parent involvement in school, depression is a significant piece.

Coll: Absolutely. I do not think we need more research to show that poverty is not good for human beings. The question becomes: What should we do with this data? What are we going to do about the fact that people are depressed because they are living in oppressive, depressing circumstances?

We herald and celebrate the resilient individuals and families that make it out of poverty, but the vast majority that remain in poverty are thought of as lacking. The core of the solution is dealing with structural opportunities. The notion of providing parenting classes or trying to empower mothers to be involved when their life circumstances are incredibly overpowering is ridiculous. We are not dealing with the contextual problem of poverty. With welfare reform, we are putting the responsibility back on the individuals. We need research that shows how destructive these circumstances are. The challenge for research is to make this information alive so policy makers think of poor people as real people and not as statistics.

Language and Family Literacy

Continuities and Discontinuities in the Assessment of Young Bilingual Children: Lessons Learned and Future Directions for Research

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Michael L. Lopez: This session targets a different perspective on bilingualism as far as the extent to which it is an issue that all researchers—not just those in the bilingual research community—need to demonstrate interest and awareness. Bilingualism is not always an either/or proposition—either one language or another. We will look at how research can speak to the additive or synergistic effects of languages, as well as issues related to the transfer of one language to another. Currently, there is much debate about programmatic educational practices in terms of one language versus another and bilingual programs. It is important that policy and programmatic decision making be based on sound research and not only on ideological principles.

One motivation for doing this session is that many mainstream studies oftentimes do not feel comfortable assessing the complexities of young non-English-speaking children's language development and other areas of functioning, and often end up excluding them. We hope to move to a different level of not excluding, and including.

David Dickinson: I am going to talk about how to deal with linguistic diversity in a study, when one is not primarily a bilingual researcher. I will discuss our work at the New England Quality Research Center (NEQRC). The NEQRC is led by Education Development Center in collaboration with the Harvard Graduate School of Education, Boston College, and the Massachusetts Society for Prevention to Cruelty to Children.

We have been focusing on classroom factors that affect the language and literacy development of children. We are interested in both children from English-speaking backgrounds and children from Spanish-speaking backgrounds. Our primary research questions are: (a) What is the pattern of growth in language and literacy among Head Start children? (b) How does classroom quality affect children's development? and (c) What is the role of the home in supporting children's development?

The research design includes fall and spring assessments of children in language and literacy. For children from Spanish-speaking backgrounds, these assessments are conducted in both Spanish and English to the extent possible. We also observe children's social and mastery development in the fall and spring. During the winter, we observe in the classrooms to assess the quality of the classroom. We also conduct fall and spring interviews with all families to the extent possible.

There were a number of challenges that we encountered immediately. We wanted to assess children whose first language was Spanish. To do so, we had to find appropriate tools, and in some cases, develop the instruments ourselves. Once we had these tools, we had to determine language in which to assess children. Since we only had a limited time to spend on assessments, we had to limit the length of time it took to do them. Thus, there were severe time constraints.

One of the essential challenges is determining the language in which to assess children. There are theoretical reasons why it is important to consider both languages in children's development. Research indicates that primary language plays an important role in the development of children from second language, non-English-speaking backgrounds.

There are many logistical problems with which to deal after one determines in which language to assess children. Suppose one wants to assess children in both languages, with which language does one start? One possibility is to ask the parents. Unfortunately, parents may over-report their children's English competence because of desirability effects. Another possibility is to ask teachers, but they may overestimate English skills because of their familiarity with the children. Alternatively, they may underestimate their skills. Another option is to rely on the judgment of assessors "on the spot" to determine in which language to assess children. Thus, there is a variety of ways to obtain the information.

Furthermore, in thinking about the tasks in the battery we planned to use, we questioned whether we needed to give all tasks in both languages. We decided that if there were tasks that we thought were highly transferable between the two languages, we would not administer them in both languages. For example, we decided to administer the emergent literacy tasks only in the child's stronger language, because we felt there would be a high carryover.

Ultimately, we tried to draw upon all of these different sources. Prior to assessing the child, we contacted the home and asked them in which language they thought their child would be most comfortable. We also asked the teachers the same question. Then the assessors, who were bilingual, would have an initial informal conversation with the child prior to starting the assessment. At that point, the assessor would decide with which language to administer the first task based on all of this information.

They would begin with a receptive language task, because it would be the least threatening for the child. Thus, on the first day, children started with either the Peabody Picture Vocabulary Test (PPVT), or the Spanish version, the TVIP. Upon conclusion of that assessment, based on how the child had done, the assessor would decide whether to continue in that language. On the second day of assessment, the child would start in the other language. At that point, they would be given the receptive language task again, and then a phonemic awareness and literacy task.

Therefore, we obtained dual language assessment and phonemic awareness in receptive language, but the book concepts and the literacy task in only one language—as one way to try to hold down the length of time for testing.

In addition to the PPVT and TVIP, we also used the Assessments of Early Literacy and Phonemic Awareness, which we developed in two languages as part of this task. We also used rating tools—which have the advantage of not having to assess the child directly, including the Social Skills Rating System and a teacher evaluation tool for language and literacy that we developed. We also used an observational tool for social skills called the Bronson Social and Task Skill Profile, which is completed by observers and thus there is no need to assess the child on two occasions in two languages.

When we give children the assessments in two languages, one might question whether the efforts to identify children's language dominance and determine whether to start in Spanish or in English worked. There were children who were from Spanish-speaking backgrounds, but were assessed initially in English because we determined that they were English dominant. Our data show that these children scored above the children who were Spanish dominant, but below the children who were English monolinguals on the English receptive vocabulary tests.

The data also show that there is a change from fall to spring in the standardized receptive vocabulary of the children, such that all groups are making gains. The classrooms are primarily English immersion experiences with some Spanish used when necessary. Therefore, relative to national norms, the children from these different linguistic backgrounds are showing gains on receptive vocabulary.

When we tried to understand the factors that predict growth in English receptive vocabulary in our assessment, language dominance was most important according to regression analyses. If children were determined to be English dominant, this helped predict growth in English receptive vocabulary as well as literacy performance. Knowing about children's literacy helps to predict their language development.

In looking at the phonemic awareness results of children when they are 4-years-old, again, we see that the determination of the language dominance of the children was accurate, or at least reasonably accurate, because the children who were determined to be Spanish dominant scored most poorly. There is also growth over time in the phonemic awareness among 4-year-olds, although not a steep growth. Overall, given how much the children have to learn, it is not overwhelmingly powerful. Growth is shown, but there is growth among all groups, especially the Spanish-dominant children who are catching up with the English-dominant children.

The value of looking at both languages is that one has a better understanding of the factors that contribute to the growth in phonemic awareness. The reading world is an important contributor and, some would say, a necessary foundation for children's early reading development. Therefore, how the children did in the fall on this English task was a good predictor of how they did in the spring on the same task. That is not a surprise. The fall to spring growth in literacy was also an important predictor. Thus, learning about letters, writing, and so forth is related to phonemic awareness.

To learn about children's growth in phonemic awareness in English, children's Spanish phonemic awareness, and growth in Spanish phonemic awareness needs to be assessed. Furthermore, growth in Spanish phonemic awareness is related to growth in Spanish receptive vocabulary.

The policy implications are obvious. If both languages are examined, one has a bigger picture of the variety of factors as well as how two languages contribute to growth, in this case, in English literacy development.

There is another reason to argue for the importance of considering language in assessments of children. Recently, we have been analyzing data using hierarchical linear modeling. With this kind of analysis, one can also take into account the language background of the child. Was the child from a Spanish-speaking or an English-speaking home? How much of the variability in the scores are accounted for by the language background of the child? In looking at the two language measures, receptive vocabulary and phonemic awareness, about 10 to15% of the variability in children's scores from fall to spring is accounted for by their language growth. With social scores, there is much less variability. To look at children's language growth and development, the language background of the home should be taken into account.

It is also important to consider the linguistic complexity of classrooms when looking at the impact of quality of environments on children's development. Several variables should be taken into account, such as how many different languages are being spoken and the percentage of children who speak English in the home. We know from earlier analyses that these factors have an impact on the quality of conversations that occur between teachers and children. When there is extensive linguistic diversity, the level of sophistication and complexity of the conversation is reduced. Teachers are dealing with a more complex group, children who are struggling to understand basic English. We see this in terms of conversations about books, such as in a longitudinal study with which I have been involved, along with Catherine Snow and Patton Tabors. Also, the kind of talk during free play and meal times is less complex.

We recently examined what accounts for the growth in children's phonemic awareness in terms of classroom quality factors. We looked at the relation between the measure of classroom quality that we developed, the Early Language and Literacy Classroom Observation (ELLCO) and phonemic awareness in a hierarchical model. We found no effects, although there were numerous effects on other variables. However, when we included linguistic diversity in our model with classroom quality, we found a significant prediction of children's phonemic awareness. Yet, we do not get it with quality alone.

Other findings are also interesting and make sense, but are a little surprising. We have a range of classrooms from the lowest quality to the highest quality. From data collected in the spring on phonemic awareness of English, we looked at a classroom with low linguistic diversity—children that only have one language in their classroom—and compared them to the children in linguistically diverse environments. Interestingly, even in the low quality classrooms, the children in linguistically diverse environments are starting out with higher scores in phonemic awareness.

Two findings are important. Most importantly, when the quality of the classrooms is higher, there is a significant improvement in phonemic awareness. However, it is also interesting that the monolingual children are able to catch up with the children in the linguistically diverse classrooms if they are in classrooms that have high quality.

David Yaden: I am going to discuss an evaluation of an emergent literacy preschool intervention, not a Head Start program. The site is in downtown Los Angeles and primarily serves the families of the garment workers and the toy industry in East Los Angeles. It is in the center of a place referred to as skid row, but many interesting and good things go on there as well. The study is funded by the Office of Educational Research and Improvement under the auspices of the Center for the Improvement of Early Reading Achievement (CIERA), a consortium of five universities and teacher educators from across the country. Our goal is to implement a 4-year longitudinal study to see if a rich literacy environment has an effect on children's English and Spanish literacy. Typically, about one out of two of these children in Los Angeles are being classified as special education solely because they cannot speak English.

Our research questions were the following: (a) What is the influence upon the Spanish and English literacy learning abilities of preschool children when exposed to emergent literacy activities in an inner-city community child care setting? (b) What is the nature of Spanish and English support? (c) What is the nature of the literacy environment? and (d) What languages does the staff speak? We are also interested in "funds of knowledge," or the information networks in communities. How can we incorporate these into the preschool curriculum? What are the characteristics of children who succeed in these environments?

The study employs a quasi-experimental, longitudinal cohort design with single subject, multiple-baseline, and ethnographic components. We are now in the second year of this 5-year study. The design is meant to be constructivist in the sense that we believe that children have an active approach to the environment. The second assumption is that it is a dynamic assessment. Even though we try to get pre- and posttest scores, the assessments we use are more for getting a window into the process. We are interested in a conceptual profile of a child. What happens between the ages of 4 to 6 years? How does a child grow? Do some areas grow faster or slower?

Another assumption is that the examiners are part of the data, which means that as we go out and interact with teachers, our presence affects the interpretation of the data. We are learning that the quality of our data collection relates directly to the quality of our relationships in the agency. If as a researcher, we do not know the children, agency staff, or families well, we obtain different kinds of data. Therefore, we have tried to develop those relationships.

Para Los Niños is an oasis in the community. Each year about 55 4-year-olds attend the center, which serves infants through 4-year-olds. We work primarily with the 4-year-olds, although the 2- and 3-year-olds can participate in our book loan program. Ninety-eight percent of the children are Spanish dominant. Two-thirds live in an area of high gang activity. The average salary is about $584 a month.

The program has four strands. One strand includes regular in-class observation with assessment follow-ups in kindergarten and elementary school. With out regular in-class observation, we participate, sometimes by teaching a class, preparing model lessons, or reading stories and playing. Our research team is active and participates with the children.

We also have a program strand in which we try to get the parents involved. The most successful activity that we have done is the book loan program. Parents come into a library, which is located in the hallway where they pick up their children, and check out books. We also conduct home visits and other kinds of activities. The third strand involves our work with the teachers and aides, and includes formal inservices, in-classroom modeling of literacy activities, and in classroom support and feedback. Our curriculum program strand basically consists of an emergent literacy curriculum; with writing, listening, and sociodramatic play centers. We want to leave something in the site after the study, so we are writing a curriculum with monthly activities.

In terms of results from the first 2 years of the program, in Year 1 parents only checked out about five books per month. By the end of the year, parents were checking out almost 25 books per month. In Year 2, we are over 25. The library is open 2 days a week from roughly 7:00 to 8:00. In terms of child participation, out of 113 children, we had approximately 80 participants for Year 1; for Year 2, we are up to almost 90. Thus, we have more participation this year than last year, partly because the parents talked to one another.

I would like to present some results from cohort 2 on the Concepts About Print test. When comparing children's pretest scores with their posttest scores, all of the children are making progress. We conduct most of our testing in Spanish. However, when our children were tested in English by kindergarten teachers, they outscored the kindergartners in uppercase letter identification, lowercase identification, consonant sounds, long vowels, and short vowels. This corroborates much of what David Dickinson said, in that Spanish phonemic awareness feeds into increased English phonemic awareness. Thus, we have a heavy emphasis on the primary language.

One of the Concepts About Print tests has a series of conceptual areas, of which book handling is probably the easiest. Most of the children are knowledgeable about directional behavior—left to right, top to bottom, left page to right page. None of the children, not even those who can read, can do the visual scanning task, which involves recognizing letters that are reversed in words. There are also specific concepts about print in terms of punctuation. There are hierarchical concepts, as well as a broad metalinguistic awareness, such as having a sense of what is one word, two words, and so forth.

From looking at the data, I believe that children grow unevenly in concepts about print over time. I looked at all of the different cohorts at different testing times, which basically represent a child moving from 4 years of age to 6. Almost all children start out with some book orientation knowledge. We have tried to get a sense of what children learn over time, and what we should be teaching them.

Our writing program is designed to increase both parent and teacher awareness. If one only focuses on the child without focusing on the teacher or the parent, the intervention will not work because the child might start something, but the teacher or parent is not invested in it. Thus, we try to work with all groups. We demonstrate activities for the teachers. We create many opportunities for the children to write. We have the classroom set up like a play environment with a play post office.

With respect to assessment, we are using a Piagetian-based assessment model, which assumes a clinical approach to testing. Therefore, we assume that a 4-year-old child can give some sense of their conceptual development when asked. In other words, self-report data from a 4-year-old has reliability. For example, we assess name writing ability—what children think their name says and reciprocity of reading and writing ability. In one class, only 21% of children were able to write their names initially. In a second class, 65% could. At the end of the year, about half of the students could write their name in the first class, and 96% in the second. One factor is different teacher styles.

According to Ferreiro and Teberosky, there are various levels to name writing. At levels one and two, children begin to look at their name. Level one is a global interpretation; there is nothing about the graphic form that relates to anything about their name. At level two, children begin to look at visual characteristics, such as quantity. At level three, children say their name and attribute a syllable unit to each graphic mark. Some of these graphic marks might not be conventional, but the children know that a syllable value goes with it. This is the level that Ferreiro and Teberosky call the "syllabic hypothesis," the beginning of phoneme awareness in terms of word and letter awareness through writing.

With respect to name writing interpretations, 81% of the children in one class are at the first level of name writing—they do not attribute any language value to their name. Its meaning is global—it does not mean it is not meaningful. But this figure is only 30% in a second class. Some 70% of the children in the second class and 30% in the first class are at the level Ferrera and Taboroski referred to as the syllabic hypothesis.

One thing we have learned is that the quality of the data obtained is related to the quality of the relationships. I was struck recently by a comment Carlos Fuentes made in his book, "A New Time for Mexico." He talks about the beauty, energy, and intelligence of the Mexican population under 18 years of age. However, he said, they waste their talents in just surviving, referring to the internal conflicts in Mexico. We are finding that one out of two children are being classified as needing special education because they cannot speak English. We are sending a group of children to elementary school who are ready to learn. But I am afraid that we will waste their talents as they try to just survive in school. Rutter stated this morning that if one is in an environment of high criticism, it results in less positive behavior. School environments often have many more negative than positive comments, which will impact our children.

We are excited about our program. It has changed our attitudes as researchers, which is interesting in terms of epistemology. What should researchers be? Should they be advocates for the people in the research environment? Or should we be passive observers and just watch the children?

Diane August: I will report on a study entitled, The Transfer of Reading Skills from Spanish to English: A Study of Young Learners. It is being conducted in affiliation with the Center for Applied Linguistics and in collaboration with Margarita Calderon from Johns Hopkins University and Maria Carlo from Harvard University. The study is funded by the U.S. Department of Education, Office of Bilingual Education and Minority Language Affairs.

The focus of our study is the way in which enabling skills in Spanish are transferable to those same skills in English. The study examines how performance on indicators of Spanish reading at the end of second grade predicts English performance at the beginning of third grade and at the end of third grade. Specifically, we are examining what gains are made over the course of a year of reading instruction in English and their relationship to students' initial skills in Spanish. We also examined differences across chronological, orthographic, and comprehension processes in both Spanish and English. We started to look at these children at the end of their second grade year. All of the children were Spanish-speaking. Half of them had been instructed in English only, and the other half had been instructed in Spanish. At the end of the second grade, most of the children who had been instructed in Spanish were transitioning into English instruction.

The goal of our study was to look at how those children who had been instructed first to read in Spanish were doing by the time they have had 1 year of reading instruction in English. Ideally, we would want to follow these children longer, but this study was funded for only 2 years. We have English-speaking children involved in the study so we can compare the outcomes of children who are instructed first in Spanish to the outcomes of children who have only been instructed in English.

The theoretical basis for this study is that academically mediated language skills are interdependent. Thus, the level of second language competence that a bilingual child attains is partially a function of the type of competence the child has developed in the first language at the time intensive exposure to the second language begins.

Research supports this point of view. Phonological awareness is the awareness that speech is composed of smaller units of sound. There is a large literature that looks at the transfer of skills from one language to another in children of the age in which we are interested. For example, a study by Durgunoglu, Nagly, and Hancin-Bhatt in 1993 looked at Spanish-speaking children in the first grade who were enrolled in a transitional bilingual education program. These researchers examined whether second language word recognition skills were influenced by a child's phonemic awareness in their native language. The results indicated that Spanish word recognition significantly predicted performance on the English word and pseudo-word reading. Additionally, specific phonological awareness predicted English word reading. These findings are consistent with other studies in this area.

In terms of orthographic skills, studies have also reported evidence consistent with the notion that there is transfer from one language to another. For example, in a study involving Moroccan primary school children whose first language was Arabic, Wagner, Spratt, and Ezzaki (1989) found that the best predictor of early French reading ability, measured at grade 3, was Arabic decoding skills measured at grade 1. This is striking because the alphabetic systems of these two languages are different.

In terms of word knowledge, there is also evidence that at every stage of reading development, word knowledge predicts reading ability. A limited number of studies have looked at relationships between word knowledge in one language and word knowledge in another language. The studies find that when there are a large number of cognates in one language corresponding to another language, those children do seem to have an advantage. For example, a study conducted by Garcia and Nagy in 1993 found that children, who are a little older than the children in our study, benefited from their knowledge of these cognates in Spanish when they were reading in English.

In terms of comprehension skills, there also seems to be a relationship between the two languages. A study by Escamilla (1987) examined how Spanish reading achievement and English oral proficiency related to reading achievement in English. The study was conducted with third and fourth grade Spanish-speaking students who were advanced enough to have reading instruction in English. The results again revealed that performance on the Spanish reading test accounted for 25% of the variance in performance on the English reading test, while oral English proficiency accounted for another 3% of the variance. Therefore, Spanish reading test scores significantly predicted English reading achievement.

There has been some work by Jimenez, Garcia, and Pearson (1995; 1996) looking at metaprocesses in comprehension instruction. They also find that successful bilingual readers all use certain strategies comprehending both English and Spanish text. Strategies included focusing on unknown words, using cognates as one source of knowledge, monitoring comprehension, making inferences, and actively using prior knowledge. These studies show that good readers in Spanish use the same strategies in English that make them good readers in Spanish.

In our study, we work in three Success For All (SFA) schools in Boston, El Paso, and Chicago. We decided to work in the SFA schools for a variety of reasons. First, the program was consistent with the kinds of skills that we were measuring in children. It is a balanced literacy program that works both on decoding and comprehension. Another important aspect of the program is that it is one of the few programs in the country where children learn to read in Spanish before they are transitioned into reading in English. In many programs in the U.S., children do not learn to read in Spanish at all, or they learn to read in English and Spanish concurrently. But in the Spanish Success For All schools, children were instructed only in Spanish through second grade, and in some cases into third grade.

Another advantage is that the Spanish curriculum parallels the English curriculum. We wanted to use the Spanish-speaking children who had been in English-only instruction as a benchmark to see where these children are in comparison with children who had first been instructed in Spanish and then transitioned to English. Finally, SFA assesses the level of implementation in their programs. We felt that it was important to have this information. We wanted to see how the program was implemented in the various sites and take that information into consideration when looking at student outcomes.

Our sample consists of 180 students. There are about 60 children at each site. Almost all of the students are Spanish-speaking children, and half of the students at each site have been in English-only instruction, while half of the students were in Spanish instruction before being transitioned to English instruction.

There is a three-tiered process of data collection. Our large-scale assessments look at Spanish and English literacy skills for all the children. We also are doing three small-scale focus studies, one at each site, to obtain a more in-depth look at what is happening with these children. For example, in Chicago, we are looking at whether children who have conceptual knowledge in Spanish transfer that information to their English comprehension. We are also conducting classroom observations and collecting information about home literacy practices. We have a parent questionnaire that asks how long the children have been in the U.S., what language they use at home with their peers, what language they use with their parents, the parent's level of education, and how much reading goes on in the home between parent and child. The survey was sent home both in English and in Spanish, and we received all the surveys back, because we gave teachers $100 for books if they collected all the surveys.

For our large-scale study, we had to develop many of our own assessments, for a number of reasons. We were assessing children both in Spanish and English, but could not find assessments in Spanish that were parallel to the assessments that we were using in English for some of the components of literacy. Furthermore, we wanted to look at the kinds of issues children might have in transferring from Spanish to English. Thus, we developed assessments that would tap into interference errors between Spanish and English. This was not an easy task. Initially, we were going to develop a closed assessment to test comprehension, but after our pilot testing, decided to use the Woodcock Johnson Test of Achievement and the Woodcock Munoz, because we could not develop a reliable instrument to assess reading comprehension.

We assess phonological awareness with an invented spelling task in Spanish and English. When testing in both languages, one must determine how much time to allow for testing. We decided to develop a group-administered assessment of phonological awareness. We have counterparts for the assessments I described in English in Spanish. We use stimuli of monosyllabic and multisyllabic words and pseudo-words, and the student response, both in English and Spanish. These phonological awareness assessments consist of four parts. One is invented spelling, where we use pseudowords. One is phoneme deletion. We have another that is similar to the invented spelling, in which the children have to produce a sentence. We do this in English and Spanish.

In terms of orthographic skills, because we feel that speed is as important as accuracy, in terms of looking at children's reading, we have children read letters, words, and pseudo-words on a computer screen. The microphone activates the timing system on the computer, so we can measure reading latencies. This is an individually administered assessment. The children read on the computer screen, and we tape record their responses.

We also assess phoneme segmentation ability. We were concerned about the phonological awareness measures because they are difficult to score. Because children have to write, there is a confound between their phonological awareness and their spelling ability, although one can score for both. We developed a phoneme segmentation activity in which we give children a word and ask them to segment it. They have to move a penny for each sound that they make. It provides a good sense of how well they are segmenting their words.

In terms of Spanish and English oral proficiency, we are using the LAS, a standardized test that measures listening comprehension and vocabulary with the scores transformed into proficiency levels. It also has a story retell task, and we are using our own rating score to code the children's retell. Also, we are using the Woodcock Johnson Test of Achievement, the reading subtest, for passage comprehension, and the Woodcock Munoz for reading comprehension.

Preliminary data seem to reveal high correlations between Spanish performance at Time 1 and English performance at Time 2 in the areas of word reading and reading comprehension for both groups of children. We are not sure why there are low correlations for phonemic segmentation. One possibility is there is much variability within our sample. Until we have collected and analyzed all the data from the last data point, it is going to be difficult to see what is going on with these children. Nonetheless, there does appear to be direct cross-language correlations for reading measures but not for the general language proficiency measures, which is what one would expect. In looking at oral vocabulary and listening comprehension, there are no correlations between Spanish and English for either group of children. However, there are correlations, except for the phonemic awareness, for word reading and reading comprehension.

After we have finished collecting the data, we plan to do latent growth modeling, which will enable us to look at growth trajectories or patterns of growth over time for individual children to see what skills have transferred from Spanish to English. We are also interested in looking at how the children who have been instructed in Spanish do compared with children who have been instructed only in English at the end of 1 year of reading instruction in English. We will likely have funding to continue this study for an additional 2 years, which means we can look at these same children as they receive more instruction in English, following them into fourth and fifth grades. This will tell us more about how children who are initially instructed in Spanish do after they have solid instruction in English.

Mariela Paez: The title of my presentation is Variations in Teachers' and Children's Language Use in Bilingual and Multilingual Early Childhood Education Classrooms, and I will be presenting information from the Harvard Language Diversity Project, a substudy of the New England Quality Research Center. The purpose of the presentation will be to highlight methodological approaches used in the project to investigate teachers' and children's language use.

During the past decades, the U.S. has undergone tremendous demographic changes as a result of increasing immigration. In 1990, immigrant children constituted 10.9% of the U.S. population (Passel & Edmonston, 1992), and this trend is expected to continue. It has been estimated that the number of children of immigrants living in the U.S. will rise to 9 million by the year 2010, representing 22% of the school-age population. These changes, of course, have had an impact on early education and preschool programs such as Head Start. A 1994 survey sponsored by the Administration for Children, Youth and Families (Socio Technical Research Applications, Inc., 1996) found that 91% of all Head Start programs had experienced an increase of at least one cultural or linguistic group in the preceding 5 years.

In addition, recent national data on Head Start indicates that only one third of the programs had an enrollment characterized by a single language, and 72% of the programs had enrollments of between two and three languages. Spanish and English were the predominant languages in the programs with a range of 1 to 32 languages represented in all.

Our goal was to investigate the language environment in Head Start classrooms with children from a variety of first language backgrounds. Our research questions included: (a) What are the language skills that children are bringing into the Head Start program in the classrooms? (b) What language(s) are they exposed to in these programs? (c) What are the different language environments found in Head Start classrooms? (d) How do children acquire English skills in this setting? and (e) What happens to children's native language development during this period?

As part of the project, we established a Spanish language classroom for 3-year-old Spanish-speaking children at the Community Teamwork Head Start in Lowell, Massachusetts. Also, we conducted classroom ethnographies in three different types of classrooms, including the one we established in Lowell. The classrooms were chosen because we thought they represented configurations that bilingual children in Head Start and other early education classrooms might experience. The three types were: (a) an English language classroom with children from a variety of home language backgrounds, (b) a bilingual Spanish and English classroom serving children who were either bilingual in Spanish and English or who were Spanish speakers in the process of acquiring English, and (c) a Spanish language classroom serving Spanish-speaking and Spanish-English bilingual children.

During the 1996-97 school year, the researchers visited these three classrooms on a weekly basis. Our basic data collection technique was participant observation. An important aspect of our research included weekly team meetings, where we would discuss our classroom visits and observations, make decisions regarding specific data collection techniques, and discuss the themes or questions to pursue in each of our settings. It was key that we did not approach the classrooms with our instruments. We just went into the classroom to observe the culture of the classroom and to learn who the children and teachers were as well as what data collection techniques might work in the different settings.

We collected information regarding the children, the teachers, and the classroom environment. We took observational field notes, audio and video recorded teacher and student interactions, and interviewed the teachers. Also, in spring 1997, we tested the children's receptive vocabulary skills, using the PPVT and the Spanish version of this test, the TVIP, to test Spanish-speaking and bilingual children. We also collected information about the program in general and the community or the town in which the study classrooms were located to learn about the context and the sociocultural environment of the particular classrooms.

To obtain language samples, we did audio recordings of naturalistic language interactions, including adult-child interactions and child-child interactions. We used the technique used by the Home School Study of Language and Literacy Development at Harvard. This technique consists of having children or teachers carry a backpack with a tape recorder in the back and a microphone attached to the shirt. The researcher follows and observes the child throughout the day, taking careful context notes on the setting, the activities, gestures, and anything else that was going on. These notes were later included in the transcripts of the language sample.

One advantage of this technique is that we had comprehensive and accurate data for investigating language use and functions in the classroom. According to the standardized measures we used, all of the children could be considered below average in their vocabulary knowledge in English and to a lesser extent in Spanish. However, the observations and the language samples demonstrated the communicative competence of the children. Most of the children could express themselves in complete sentences and could carry on fluent conversations in their dominant language. Thus, although they appear from their performance on the standardized assessments to have deficits in vocabulary, they still demonstrated good syntactic, discursive, and pragmatic skills.

After participating in the classroom for several months, we conducted open-ended interviews with the teachers. The interview complemented a typical questionnaire that we had, which included questions regarding years of experience, educational level, ethnicity, and language skills. The interview, however, was not typical. The advantage was to provide in-depth data regarding the teachers' perspectives on early education and their beliefs and practices about second language learning in the classroom. The interview had sections that included questions about their history and experience as teachers, their teaching philosophy, their theories of language learning, as well as questions about the language used in daily routines that we had observed.

We taped and transcribed the interviews and then analyzed the transcripts using qualitative techniques. We would start with an open-ended question, such as, "Do you see differences among children in how they learn a language?" Thus, it is more a conversation about the teacher's beliefs and notions of how children are doing in the classroom. We needed to obtain the teacher's experience in the classroom in order to get important information from the interview.

Finally, we developed a print inventory to document the type, source, length, and language of the print environment in different classrooms. The researcher takes the print inventory and goes through the entire classroom looking at all the print in the classroom and coding it in different ways. We also coded it for length, using a scale from 1 to 4, where 1 was only letters and 4 was connected text. We also coded for source—teacher print, child print, or teacher with child print mixed. Finally, and most importantly, there was a category for language to document the language of the print around the room. Therefore, after conducting the print inventory in the classrooms, we would categorize the print environment as all English, for example, or mixed, or more English than Spanish.

In addition to our ethnographic research, we also conducted follow-up observations of Head Start bilingual children when they entered kindergarten. Our approach was similar, but our strategy was different because the data collection occurred in one-time visits. Thus, we took the knowledge gained from doing the extensive data collection the previous year and tried to develop some forms to capture the diversity in the classrooms in a one-time visit. We developed forms observing language use for the emergent literacy observation and a short teacher interview. One language form was used to record the language used by the lead and the assistant teacher during different situations, such as instructional time and organizational and personal communication. We rated on a continuum from all English to all Spanish.

Another form was used for the emergent literacy observation. We adapted it from the print inventory, which at five pages was extensive. We reduced it and gathered information about resources and literacy materials and took notes about the small group literacy activities that we observed in the classroom. Based on this form, we were able to classify classrooms as having a high, medium, or low print-rich environment.

We also used a teacher interview form. Again, some of these questions were adapted from the more open-ended interview. The purpose of this interview was to collect information about the language background of the children in the classroom and to inquire about language and literacy goals. We found that this interview was helpful for obtaining a description of the bilingual classroom according to the teacher's interpretation of the bilingual program, because there was a diversity of bilingual programs in use.

We found that the observation and the tools used were helpful in describing the different language environments. They also were effective in recording the diversity between the different programs, classrooms, and teachers. The findings from these ethnographic studies can be found in an upcoming publication of the *NHSA Dialog*, entitled "Language Development of Linguistically Diverse in Head Start Classrooms."

In conclusion, I would like to share some thoughts on the implications of conducting research with young bilingual children. First, it is crucial that we consider the complexity and diversity of different classroom environments in early education, and how these environments might impact the learning experience of children. Second, whenever possible, researchers should try to combine methods to get in-depth data regarding the learning experience and the quality of teaching environments for young children. Finally, we need to be open-minded and develop new approaches and techniques. As researchers, we often rely on instruments that have a long history, when we should be developing more sensitive instruments to study more diverse populations.

Patton Tabors: I conduct educational research with young bilingual children, but I would like to broaden that to talk about conducting educational research, period, because there are going to be bilingual children in every classroom soon, with young or older children.

The statistics on the numbers of bilingual children who will be moving through the education system in this country are compelling. Any educational researcher who is embarking upon any kind of study, no matter how small or how large, will be making decisions about whether people are included or not in their research. Even more concerning is the question of not considering this issue and doing research as though every child has the same level of language proficiency. Such findings will not be explanatory, given that one may not have considered the population being studied. If the decision is to include bilingual children in a study, then one has to consider the challenges discussed today. Those of us who have been doing research on bilingual children have, in fact, also been developing tools, methods, and assessments that can be used in many other topics.

Many questions come up in doing this kind of research, many of them brought up by today's speakers. For example, how do we know who is a bilingual child? David Dickenson discussed a lengthy process for deciding how bilingual a child is, but how do we even know in the first place? Researchers need to determine the home language context. How does one obtain that information? One has to go to as many sources as possible to obtain this kind of information.

What is language proficiency? How does one test for language proficiency? How does one find out what young children can do in their two languages? These are all important questions that need continued study.

One must think about how those two languages play out in development. Our presenters offered compelling evidence about the transfer of skills. Children being taught in Spanish in a high quality classroom are able to transfer those skills when moving into their next educational situation with English.

How important it is to collect information about the context of development? Diane August mentioned a survey that was sent home in English and Spanish to all of the parents in the group that she was studying. This is critical information to begin with to find out what is happening in the homes, such as the cultural background and linguistic uses and attitudes of the parents—do they think that their home language is important or not? This could make a difference in how children develop over time.

We also have talked about a multiplicity of methods for collecting data in the classrooms, looking at language input, the quality of the classroom, and the diversity of the classroom. David Dickinson presented compelling evidence about how having a number of second language learners in a classroom appears to be a determining factor in children's phonemic awareness. That is probably a factor that has never been looked at before in terms of phonemic awareness.

Most importantly, how does one assess bilingual children? How does one find out what these children know, particularly young bilingual children? David Yaden stressed observation and the importance of spending time with children. Mariela Páez talked about taping children and spending time observing them. Those are highly appropriate assessment techniques.

We have heard about how as researchers we have tried to use assessment tools but that they did not fit our purpose; therefore, we had to develop our own. I hope that there will be a large industry producing considerably more assessment tools in a variety of languages. Currently, Spanish is being emphasized. However, children come into school using many other languages.

Finally, educational researchers must seek out information about how researchers who have been working in this area have begun to construct solutions to some of these concerns. We consider ourselves to be resources along these lines. The more we talk to other people who have not had these kind of experiences, the more the research that we do will serve not only young bilingual children but all young children well.

Question: It seems that the desired classroom for Spanish- and English-speaking children is conducted in Spanish generally. Would you agree that Spanish is the preferred language for conducting preschool classrooms?

August: This is an issue we need to study more carefully by following children who are instructed all in Spanish as they develop their Spanish skills and then transition into English and looking carefully at the component skills of literacy as well as their knowledge of other subject matters as they go into English. There is a real concern, however, that because English is such a dominant language in the U.S. that if children who come from other language backgrounds are put into English instruction at early ages, they will stop speaking their first language. That makes it difficult for these children to communicate with their parents as they get older.

Comment/Question: Diane August was saying that if there is a high quality program, a high quality family, a high quality background for the child, a commitment to dual language and so on there can be transfer of skills from one language to another. The reality in this country is that in almost all of the situations, there are low quality preschools, low quality public schools, low quality teachers, and low quality language communication parents. These children do not have highly educated, balanced bilingual parents. What is the future of these children under those circumstances?

August: That is a very difficult question, of course. Systemic reform, if implemented properly, does hold promise for helping these children meet high standards. One of the issues in the past was that children who were considered limited English proficient, whether of Spanish background or another language background, were relegated to special programs. They were not assessed, and the programs were not assessed. These children were not taught to the same standards as other children. When academic standards are developed, one tries to figure out how to incorporate English language learners into these standards and whether additional standards are needed to help benchmark their progress and assess them for system accountability purposes. I still believe that opportunity to learn is extremely important and that schools should be provided with the resources they need to properly educate these children. It is all part of the formula.

Dickinson: In our data, we looked at normal Head Start classrooms that varied in quality—some were of high quality, many were of mediocre quality, and some were of low quality. We noticed that the 3-year-olds showed steeper patterns of growth than the 4-year-olds. While there continued to be growth in the children from Spanish-speaking homes, it seemed to be flattening. I do not know whether I can extrapolate that pattern upward, but I know that other data looking at children in Head Start classrooms with children who are 5 show even less evidence of growth and maybe some slippage. The message I take from that is that there is a danger of failing to continue to challenge children. The 3-year-olds who are entering Head Start classrooms have much to learn, and the classroom is providing variety. I am concerned that that ceiling and challenge level may not continue to exist.

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The Social Context of Early Language Development for Children in Poverty

CHAIR: Jane B. Atwater
DISCUSSANT: Louisa B. Tarullo
PRESENTERS: Jane B. Atwater, Stephanie Hudson, Barbara Alexander Pan, Leah Bratton, Joanne Roberts, Catherine Tamis-LeMonda

A primary mission for Early Head Start (EHS) is to enhance children's progress through the developmental transitions of infancy and early childhood and, ultimately, to foster the child's school readiness and academic success. The development of early communication and language skills is fundamental to this mission. For most young children, the home environment and parent-child interaction, in particular, provide the primary social context for the development of early communication and language. Thus, an essential component of EHS services is to provide parents with the skills and resources they need to foster their children's communicative competence and developmental progress. This symposium has two overarching goals: (a) to contribute to the research literature on families in poverty through analyses of factors that influence parent-child interaction as the context for children's early language development, and (b) to contribute to Early Head Start practice by discussing the implications of these results for intervention.

■ Relationships Among Risk Factors, Parent-Child Interaction, and Children's Development in Early Head Start Families

Jane B. Atwater, Stephanie Hudson

Research has demonstrated that children in poverty are at risk for developmental declines in early childhood and are most at risk when their families experience multiple challenges (e.g., Brooks-Gunn & Duncan, 1997; Sameroff & Fiese, 1990). Recent studies have identified parenting processes that may contribute to developmental risk for children in poverty. For example, poverty has been associated with lower rates of parent talk to children and with poorer language outcomes (Hart & Risley, 1995; Walker, Greenwood, Hart, & Carta, 1994). Furthermore, in a recent study, parents with the most economic and social challenges were the least likely to spend time closely involved with and talking to their children (Atwater & Williams, 1996).

The present study was designed to contribute to this literature through home-based observations of parent-child interaction in families living in urban poverty neighborhoods. Families were selected from a larger sample based on seven risk factors: (a) very low income, (b) large family size, (c) single parent status, (d) limited parent education, (e) unemployment, (f) teen parent status, and (g) limited English proficiency. The Lower Risk Group (*n*=55) included families who had no more than two risk factors, while families in the Higher Risk Group (*n*=43) had four or more risks. Parent-child interactions were observed during home visits when the child was 14, 18, 24, 30, and 36 months of age. Child outcomes included Bayley scores and communication during home observations at 30 and 36 months.

Analyses focused on parenting behaviors associated with children's communicative competence and developmental progress. Specifically, we investigated: (a) consistency across risk groups in the parenting behaviors associated with children's communicative responses, (b) risk group differences in the occurrence of facilitative parent behaviors, (c) group differences in contingent parent response, and (d) parent behaviors as possible predictors of outcomes at age 3. We also addressed issues directly related to intervention: (a) translation of results into effective intervention strategies for high-risk families, and (b) possible challenges and solutions. Presentation goals are to contribute to an understanding of factors that place children at risk as well as to an understanding of protective processes that may promote children's development despite risk.

Sequential analyses investigated: (a) parent behaviors that set the stage for child communication, and (b) parent responses to child verbal and nonverbal communication. In both risk groups, child communication was most likely during shared activities with the parent, following prompts and expansions of child communication, and following parents' positive/exuberant comments. Compared to the higher-risk group, lower-risk parents were more likely to exhibit behaviors associated with an increased probability of child communication and were more likely to respond contingently. Shared parent-child activities, contingent responsiveness, and prompts and expansions of child communication were predictive of children's Bayley MDI scores and verbal communication during home-based observations at age 3.

The implications for intervention is that the results underscore the importance of moving beyond traditional parent education practices to promote facilitative parent-child interaction at the earliest age possible. However, the complex needs of high-risk families present several challenges and barriers for incorporating such strategies effectively and for adapting to the individual needs of diverse families. To address these challenges, possible solutions are proposed for working with intervention staff, children and families, and program systems.

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■ Parenting Stress and Maternal Communication with Toddlers in Early Head Start Families

Barbara Alexander Pan, Leah Bratton

One of the most powerful predictors of school readiness and academic success is children's vocabulary skills. Many children entering Head Start are already behind their middle-income peers in vocabulary development (Vernon-Feagans, 1996). Among the explanations put forth for this lag are the quantity and quality of adult talk with young children. These explanations are based on research that shows that the quantity of adult talk is related to child rate of vocabulary growth (Huttenlocher, Haight, Bryk, Seltzer, & Lyons, 1991) and that documents SES-related differences in amount of talk and nonverbal communication (Hart & Risley, 1995; Pan & Rowe, 1998). Large variation in maternal communicativeness among low- and middle-income mothers suggests the need to identify mothers most in need of intensive intervention around communication with their infants and toddlers.

The study examined the relationship between parenting stress as reflected in the responses to the Child Abuse Potential Inventory (CAP; Milner, 1986) and mother-child communication in a sample of 133 mothers eligible for Early Head Start living in southern Vermont. Because mother-child communication occurs in the context of broader parent-child interaction, it was hypothesized that stress in the interaction might be reflected in the amount or quality of communication between parent and child. Based on their responses to the CAP, approximately one fifth of the mothers were experiencing high levels of parenting stress at baseline. Furthermore, validity indices indicated that 38% of the sample might have tried to project an overly rosy picture of their level of stress, which suggests that the levels of stress may have actually been much higher.

Videotaped mother-child interactions of children aged 14 months were examined. Perhaps not surprisingly, mothers in the high-stress subsample were less likely to be locatable and/or willing to be videotaped than were other mothers in the research sample and were more likely to have dropped out of Early Head Start. These mothers thus constitute a particular challenge both to researchers and practitioners. For those mothers who were experiencing high levels of parenting stress but nonetheless remained engaged in the research study (about 50%), levels of maternal communicativeness with children aged 14 months tended to be somewhat lower than for the sample as a whole. Furthermore, relatively communicative mothers in this subsample differed from their peers in the relationship between verbal and nonverbal communicative behaviors and between those behaviors and indicators of parenting stress. In both the high parenting stress subsample and the sample as a whole, maternal communicativeness was related to educational level.

Children in this high-risk group appear to be holding their own communicatively at 14 months. They were indistinguishable from either their low-income peers in the study or from 14-month-olds in a middle-income comparison group on most measures of communicative development employed. This suggests that infancy and early toddlerhood may represent an optimal period for intervention around parent-child communicative interaction. The challenges and promise of intervention with children of parents experiencing clinically significant levels of parenting stress were also discussed.

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■ Functions of Language Use in Mother-Toddler Communication

Joanne Roberts, Catherine Tamis-LeMonda

Observational studies of mother-child interactions have shown that caregivers who engage in high amounts of verbally responsive interactions with their toddlers have children who are more advanced in language months and years later. In general, it is the quality of verbal stimulation, rather than sheer quantity that appears to contribute to language outcomes in the 2nd year. In particular, maternal affirmations of children's interests, play prompts, descriptions, imitations, and utterances that expand on children's verbal and nonverbal communications predict language acquisition in children from middle-income families. In this investigation, we extended the study of maternal verbal stimulation and children's language to low-income families in New York City. Specifically, we assessed 28 communicative functions in the language of 75 low-income, ethnically diverse mothers and related these functions to the communicative competencies of their 14-month-old toddlers.

Mother-child dyads were videotaped in their homes when children were approximately 14 months of age. Mothers were presented with three bags of age-appropriate toys and were asked to play with their children for 10 minutes. They were asked to restrict their play to the toys provided, not to involve other household members in the interaction, and to ignore the researchers as much as possible.

All videotapes of the free play sessions were later transcribed. Transcripts included mothers' and children's verbal utterances and communicative gestures. Experimenters coded language functions in mothers and communicative functions in children from the transcripts while simultaneously viewing the videotape. Separate experimenters coded mother and child language over two different passes so that experimenters would be unaware of the partners' language

Each maternal utterance was coded as 1 of 28 functions. Maternal language functions ranged from supportive communications that transmitted information to the child (e.g., labeling) to unsupportive communications that either lacked information or were inconsistent and restrictive of the child's focus of interest (e.g., prohibitions). Children's language was coded using a system adopted from existing studies on the functional diversity of children's language in the 2nd year. Based on a review of the literature, together with observations of the videotapes, 15 communicative functions were defined: (a) random utterances, (b) responses to social partners, (c) object/action requests, (d) declaratives, (e) labels, (f) recurrences, (g) imitations, (h) references to actions in play, (i) utterances of possession, (j) utterances of location, (k) utterances of notice, (l) references to social routines in play, (m) descriptions, (n) objections/refusals, and (o) distress.

Both maternal and child language functions were the next factors analyzed. Maternal language categories formed three factors: (a) didactic, (b) directive, and (c) asynchronous. The didactic factor included language functions that were verbally responsive and supportive of children's language development (e.g., imitations, descriptions, and labels). The directive factor was comprised of language functions that directed children's behaviors (e.g., action directives, attention directives). The asynchronous factor included functions in which the mother's focus of attention was inconsistent with children's focus or actions (e.g., prohibitions). Children's language formed two factors: (a) communicative (i.e., a factor comprising utterances that expressed a range of meanings), and (b) stress (i.e., a factor comprising utterances that expressed negation, objection, and distress).

Results indicated that the maternal didactic factor was significantly related to the communicative factor in children. The directive factor related to both stress and communicative factors in children, although its relation to the communicative factor was weaker than that of the maternal didactic factor. The asynchronous factor did not relate to either child factor.

These findings indicate that mothers engaging in high levels of didactic language have children who use language to express a range of communicative functions, already by 14 months of age. Directive mothers also appear to provide their children with enough linguistic information to foster communication, but their high levels of control and intrusiveness also appear to foster high levels of distress in their children.

Acquiring Reading Proficiency

CHAIR: John Hagen
DISCUSSANT: Susan Neuman
PRESENTERS: Scott Paris, Dorothy Strickland

John Hagen: This session is on acquiring reading proficiency. There is not any area of children's achievement that is viewed as more important not only to academic success, but also to success in other areas than reading. However, there is also considerable controversy—that has been true over the years and is still true today—in terms of what reading means, how it is acquired, and what happens when things go awry.

In both psychology and education, we certainly have interest and concern in generally two kinds of areas. One is trying to study and understand the normal process in development and acquisition. The other has to do with individual differences. Some people focus primarily on one and some on the other. In the area of reading it is absolutely essential that we consider both.

In recent years, the different approaches to reading seem to have real consequences and at least it is plain that in some states, notably California, a lot of the fall-off in measured achievement across the state was attributed to particular approaches to teaching reading. We are also all aware that reading per se is important, but it also seems to be correlated with and predict many other aspects of children's achievement.

Our two speakers will show that we have to consider children's skills and acquisitions well before the time that reading is taught formally, which is typically first grade. We will begin with Dorothy Strickland, who is editing a book on beginning reading and writing.

Dorothy Strickland: I am going to talk about the research base for early literacy development policy and practice, focusing on what Head Start teachers should know and be able to do. They need to know a lot more than about the children with whom they are specifically working. They need to know what happens before and what happens after to make some sense about what they observe and what they need to do to promote literacy with the children with whom they are working.

I am talking to you about these things as leaders—people who are responsible for policy and practice in terms of professional development. When I am talking to classroom teachers, I begin with a piece of writing. It has the word Cinderella spelled at the top, "C, n, d, r, l, a." Then there are scribbles on the page, and at the bottom there are the letters "t-e-h e-n-d." I ask the teachers what they think about this child in terms of what this child knows about literacy. This child had just turned 5 at the time. She has made the connection between the written word and the spoken word. She has been read to, obviously, and one of the books that she has been read is *Cinderella*. This is her own Cinderella story, which is the way she put it. She is definitely making the connection. She has an understanding of left to right progression and also the amount of verbiage on a particular page, as she has filled up this entire page.

No one saw her do this, but by all indications she did probably move left to right. We heard her read it, and she read the story to anyone who would stand still or sit still long enough. She was looking left to right with some sense of directionality. She also has a sense of how print looks on a page. She has a sense of beginning, middle, and end, which we would know for sure when she retold the story. Certainly, even in terms of how print works, she has replicated that even by virtue of having "The End" at the bottom. There is no way of knowing if she has some sound/symbol relations. We did ask her how she knew how to write the word Cinderella. She started to say something about sounding out, and then she looked sheepish, because she thought that was the right answer. She said, "I looked at the book." The fact that she went to look at the book is an extraordinary strategy in itself. Of course, she knew where to look. She attempted to copy it. There is not anything here that can tell us that she knows anything about sound/symbol relationships. It is interesting how early children have this mindset that that is what reading is about—that it is about sounding out.

Head Start teachers, even if they are working with children who might be 3, certainly child caregivers regardless of age, should be able to do an analysis like this. More and more, this is what is being demanded of them. They should be able to look at what children are doing, observe them, and have a sense of where they are developmentally along a continuum. That is what I want to focus on. They know about child development. What is less likely is that they would have a sense of early literacy. While it is less likely, it is definitely going to be a part of what they not only should know but also must know to continue working with these children.

Compare these three examples, which all actually happened in different child care centers: In the first example, Malik, age 4, enters a child care center. It is warm and inviting. A series of Mother Goose cutouts line the walls and bright-colored carpeting covers various areas of the floor. It is December, and Malik's classroom has been decorated for the holidays. He looks across the room and notices some letters hung across one wall. They spell out Merry Christmas. Suddenly Malik becomes excited. He points to the word Merry and shouts, "That my name, that my name." The caregiver, who is busily helping children take off their coats notices what Malik is pointing to, but fails or is just too busy to acknowledge its significance. Instead, she urges him to start unbuttoning his coat. He persists several times, turning to the other children to announce what he has discovered. At this point he is told, "Quiet down now, we'll talk about the decorations later."

Our second example takes place at an urban kindergarten during cooking time. The children are excited because they have been told that they are going to make holiday cookies. It is a special occasion because several people from the nearby university are coming to observe what they do. Seventeen children are seated at two long tables. The instructional assistant positions herself on one side where the two tables meet, thus making it possible for all the children to see her. She proceeds to measure and mix the ingredients. The teacher stands at the opposite side of the tables. She describes what her assistant is doing and monitors the children's behavior to see that they are watching attentively. Children who sit nicely are allowed to stir the batter. The instructional assistant carefully drops small portions of batter on the cookie sheets and places them in the oven. The cooking demonstration ends.

In our third example, a university professor is surprised to find that most of the 50 picture books she recently gave a child care center are nowhere to be seen. She does notice two of the sturdy board books in the classroom for 3-year-old children, though none of the others are visible. When she inquires about this, she is told that they have been placed safely in the closet, out of the reach of the children so that they will be kept clean and no. be destroyed. She is assured, however, that they are being used as reading aloud material.

In terms of the research, there are two main areas that have converged to match with the research on child development to give us some strong evidence about what we should be doing with young children. These three areas, child development, early literacy research, and brain research come together beautifully. Of course, there is a changing view too nationally about what it means to be literate.

The old days of functional literacy used to mean about 4th grade; now it means 11th grade, and this is a big difference. We do not just talk about literacy anymore, we talk about literacies—all the different ways that we deal with text and all the ways the texts come to us, and using them concurrently. We worry a lot about the children who are not succeeding. This is one of the big national crises in this country.

There are increased public demands. Almost every state has a "guarantee," saying that every child will read by 4th grade. In some states, it is 3rd grade. That means that we need to rethink what we do. It does not mean that we need to hurry children up. We do need to do more that is intentional and do it at an appropriate time. The brain research certainly supports the fact that there may be a critical time. It does not mean that we give up if children do not get it at that time, but it is so important when they are very young to get it.

In terms of emergent literacy, studies of much younger children than ever before are being conducted. Any mom will tell you that even before the age of 2, children can read the McDonald's sign. They know it at the restaurant, in a magazine, or in a newspaper. That is reading. People worry so much that when we talk about reading with young children that we are talking about phonics or memorizing letters. We are talking about the whole range of how people deal with print or graphics. It starts early, and we need to intentionally foster it.

It is important that we know it is social and not just cognitive. The people who work with young children need to know that they can foster an environment where this happens, where it is promoted, and where it is supported. One of the things researchers have done differently from the past and from a lot of the research that has been reported here is that they tried to get into "natural surroundings." They went into homes to listen to and watch what children were doing. They went into classrooms, which is not a natural surrounding, perhaps, but where they attempted not to interfere and watched how children go about doing what they do when they learn about literacy.

We can learn from that and support and enrich the environment in the ways in which we know children go about it. "Natural" does not mean some kind of neuro-ripening where one lets them sit there while learning through osmosis. There are things that can be done that inspire children and support children's development in ways that they would normally go about learning anyway. Every child deserves thought opportunities. Researchers need to analyze these opportunities from the child's point of view to discover what the child is trying to do and how the child is trying to figure things out. Only in the classroom are teachers asking why a child said something or what a child thinks about a topic. Only by listening will teachers tap into what children are attempting to do.

We used to think that oral language came first, and there had to be some level of oral language before literacy began. We now know that they develop concurrently. This does not mean that oral language is not foundational. Nothing or very little is going to happen with literacy if children do not have a strong oral language base, but children support one another and interact. Children are learning a lot about literacy very early on, even before they have a very high oral language base. It is a relatively new notion that they are learning them concurrently. Children need to be active. They need to talk and to use all of their sensibilities and senses. Building on children's cultural backgrounds is crucial. Actually, it is non-negotiable. One builds on what children bring, and they become responsive adults.

The Head Start Reauthorization Act is what Head Start is saying teachers need to know and be able to do. There are standards at the top. At the bottom, there are performance measures. The performance measures are things that we expect children to be able to do. These are scary for many. In order to deal with these measures, we have to fill in what teachers need to know. This is not unreasonable, quite frankly, as long as teachers understand what it means. In terms of writing, even if they are working with very young children, teachers need to have some sense of the development of writing and spelling. The random scribbling, at least at first, is not unlike the random babbling that babies do. When they begin to make more intentional strokes, that is more like imitation. We imitate them; they imitate us. We can tell it is more intentional now. This is a wonderful stage: they make sounds for which you laugh and hug them, and then they make more sounds.

When they get some sense of letters, they make strings of letters. They move on to one-letter spelling. Four-year-old children in Head Start will begin to do some of this. It is not something to be forced. With the right support and encouragement, it will happen with many of the children. Teachers also need to know that in any classroom, there will be a whole range of literacy skills.

Usually when children go on to kindergarten, and certainly in 1st grade, they begin to write sentences and acquire a sense of some of the rules that govern the language such as the alphabetic principle.

Scribbling is a famous example. Researchers at the University of Indiana asked children to write their names or anything else they could write. The children from different backgrounds scribbled, and their scribbling looked like adult writing. A 1st grader said, "That's mommy's writing." Mommy's writing to him was cursive writing. Children watch and imitate. Another example is from a New York City prekindergarten. A youngster came in one day saying she made *l*s and *t*s, *l*s and *t*s. After some questioning, we discovered that she was making some lines on a paper, and someone at home said, "Those are Ls and Ts." Lois Bloom first informed me that the child is not imitating us at first. We imitate them, and then she imitates us. If the child says or does something we think we recognize, we give her support, encouraging her to continue. This little girl was in a classroom with a teacher who understood what was happening when the child came in with her paper. The child continued to make Ls and Ts throughout the morning, and, at the end of the day, she gave the L and T pages to everyone as birthday cards.

It is such a beautiful and true story about purposes for literacy. This is what happens when there is support. Unfortunately, the things that one would think would be so common, ordinary, and sensible do not happen with some children. Often when children begin scribbling letter strings, they will ask what their writing says. They know it is supposed to say something, but they are not sure. The teacher at a kindergarten classroom in Pittsburgh had been doing some theme work. She had been reading fairy tales to the children, and at one point, they could draw a picture and write about it. "Writing about it" is often a picture, scribbling, or anything that child is doing. It is usually characterized by drawing or writing because it is a composition. A child wrote, "I do it myself."

No child learns the same way; it is recursive, going back and forth. Teachers who are working with young children should have a sense of this. We tend to focus so much on phonics when a great deal has to do with visual memory. Mistakes are often with visual memory: is it spelled -ent or –ant; –sion, -tion, or -cion? This is visual memory because the sound is exactly the same.

William Teale has conducted research on observing children who were recreating text. Text had been read to them, and then they read it. It is important, in fact, crucial, to have books out so children can read them, especially the books that you have read to them. Elizabeth Sulzby has worked with Teale on how the process of recreating text develops.

We know that, at first, children seem to simply label what is in the picture, and they tell the story in an oral-language format. Then they move closer to a more formal written-language format, using phrases like "he said." Then they move on to a print-governed format.

When teachers read aloud on a regular basis, it is crucial to have copies of those same books for children to return to on their own and reconstruct text. This is reading and writing in the early years. They begin to get a sense of the alphabetic principle and how the system works; they learn largely through many experiences with the system.

Those who have responsibility for policy and practice must do more to help teachers understand how important these issues are in terms of their own knowledge base, and how important it is to improve and know what to do with that information so that children learn to read and to write in much the same way that they learn about the rest of their world.

Hagen: Scott Paris will tell us about the acquisition of reading and the best ways to approach reading.

Scott Paris: The current views of reading development have a perspective that begins in infancy and extends throughout a child's life. Reading is not a school accomplishment; it is a life accomplishment. This is so important for children in Head Start. The defining achievement in school is the ability to read and write, so literacy has always been paramount in educational

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concerns and in measures of achievement. From a developmental perspective, even in older children, we utilize the same notion of a trajectory. We need to know where children are going as well as where they have been.

You have heard the term "balanced literacy." It comes from a compromise in the reading wars, characterized by the top-down versus bottom-up camps. It is a strange war in which politicians and business people fight, and teachers and children fall by the wayside. The sad thing is that children are getting bounced back and forth in this top-down, bottom-up war between publishers and politicians and the current political milieu of establishing standards and having accountability tests. We lose the focus on the child that we all bring to the classroom. We want to try and create in a balanced literacy program a child-centered perspective as opposed to a curriculum, assessment, or instructional focus. That is the good part of the notion of balanced literacy.

Certainly there is more emphasis on phonics instruction. Whole language instruction is getting blamed for all the ills of America's children. The notion of balance has been to correct what people perceived as an inability to teach explicit and direct phonological skills. It seems to be a compromise between the motivating language-rich experiences that were part of whole language that have fallen out of political favor, but not necessarily out of educational favor, and direct phonics instruction.

We need to worry about the coherence between grades and between classrooms. There is much more emphasis on homogeneity of approaches for literacy. Part of this homogeneity of literacy is encouraged by state standards, another by a notion of balance. I want to argue that balance is going to be child-focused.

We will use these three characteristics from the primary literacy standards as a benchmark. They capture the fundamental aspects of what we want to encourage in very young children from the start: we want children to be able to crack the code. We want them to understand the relationship between sound and print; we want them to understand, first and foremost, that language and literacy are communicative acts and that meaning is what is being transmitted or transacted. These reading habits are crucial to begin in early childhood.

The shared reading and the storybook reading—the kinds of things that Teale and Sulzby emphasized with emergent literacy—are absolutely critical, beginning at birth. In fact, there is an interesting Japanese study that shows by 18 months of age, the typical Japanese parent reads to the child 20 to 30 minutes every day. Put that together with Teale's finding in Texas that children beginning kindergarten from disadvantaged homes often had as much as 1,000 hours less lap time with joint storybook reading than children from more advantaged homes. There is a tremendous differential history of experience with simply the literacy habits that promote children's early reading and writing.

Writing has the same notion; there are important habits to set up to understand that writing accomplishes different communicative purposes with different genres. Like print-to-sound conventions, there are language-use conventions in the way print is presented in any distinct language: left to right, for example, or capitals and punctuation.

When we talk about balance, we are talking about a balance of a code and a meaning focus, a genre focus, and a convention focus. We are talking about balancing that in every aspect of the curriculum instruction and assessment.

We find children are getting pressed down into kindergarten. Kindergarten curricula are much more academic than they ever used to be. The press to acquire these early skills, and to demonstrate them, is becoming more apparent all the time.

With the print-to-sound code, what we see in instruction is explicit in the alphabet, with alphabet books and with particular rhyming and chanting. Phonemic awareness is usually considered as rhyming, segmentation, and blending.

We know from early studies such as Bryant and Baddeley that by ages 3 or 4, children who had the ability to segment, blend, and rhyme were the ones most likely to make early ready success. Whitehurst and Lonigan studies show clearly that phonological sensitivity at an early age of 3, 4, or 5 predicts reading achievement. It is clear that the early sensitivity and discrimination of language sounds that go into phonemic awareness before children ever learn to read is a good predictor of early reading. We know that concepts about print from Marie Clay's work in New Zealand on the conceptual orientation to directionality, word boundaries, and concept of word are absolutely critical. There are phonological discrimination abilities, and oral language and vocabulary are critical.

Risley and Hart's book in Kansas compared children from lower, middle, and higher economic environments. They showed that, from the 1st year of life, the quantity and quality of language environments are suppressed in children in at-risk environments. They estimate that by about 5 or 6 years of age, children in the higher economic environments have heard something on the order of 5 to 10 times as much language as children in the lower environments. This indicates the importance of simple exposure to rich language, vocabulary, and syntax. There is a huge difference in responsiveness. Some of what places children at risk in Head Start classrooms is certainly the kinds of language environment that they have, either in terms of quantity or quality. We know that this is an important aspect of the instruction from Pre-K on.

Likewise, there is a meaning aspect that is important. Interestingly, what the research says is that it is not enough just to sit with a child and read aloud or point at pictures. Certainly that is better than no experience. In fact, there are sophisticated ways to have interactive experiences. Edwards, Whitehurst, and others have shown that sometimes parents need good models to know how to go about teaching children to read. Simply pausing once in a while and asking children questions is an effective strategy that sometimes parents do not realize. Pointing out how print corresponds with the actual meaning and not just the pictures is sometimes what needs to be made explicit for parents, so they teach it to children.

Several years ago we worked with Even Start families and tried to create an observational inventory. This allowed the Even Start leader to go into a home, watch a mother read a book to her 3- or 4-year-old child, and then use that observational inventory as a way to coach the mother on additional things to do. These things included pausing, asking questions, talking about the story when they finished, and pointing out the connections between print and the meaning of the story. Things that most middle-class parents take for granted sometimes need to be modeled and taught to families who are not used to that.

We need to look at dictated stories and listening comprehension as bridges, and how 3- and 4-year-olds have an orientation to print. They scribble environmental print and bridge. We need to make those bridges explicit and frequent for children. With slightly older children, the code emphasis is on sight words. If one examines oral reading fluency, there are three parts to it. One is the accuracy, at which running records and miscue analyses look. The second is the rate of reading. The third is the intonation of prosody. If one looks at oral reading fluency, one will find that some children master parts of that, but not all three components.

Imagine a typical 3rd grader who has a problem. The child reads flawlessly, and when asked for a retelling or asked a question, the child says, "I don't know" or shrugs his shoulders. He is word calling. He calls out all the words and has very little attention to the meaning. Contrast that to another child who stumbles and makes a number of miscues but gets through the passage, and when you ask for a rendition at the end, it is pretty good. In other words, she is a gap-filler. Even when she has to guess words and fill in, there is an orientation to the meaning.

We find that there are a significant number of children who read orally but do not comprehend or who stumble but do comprehend. Oral reading fluency, when measured by accuracy or rate alone, is not always an accurate indication that the child had developed reading proficiency. The key seems to be this prosody-reading with intonation. When a child reads, "Oh...look...said...the...boy...it...is...my...mother," it is quite different than "Oh look, said the boy, it's my mother," or, "It's my mother."

When children read with intonation, Steven Stahl says they are making syntactic and semantic boundaries as they are reading. They are processing at a deeper cognitive level. Part of what is important when we look at oral reading fluency or repeated reading is that children are getting accurate reading at a reasonable rate with intonation. The studies of repeated reading show that repeated reading of familiar books accelerates reading development when all three components are improving.

The interesting thing about that is it is not enough to put books in front of children. It is not enough to read aloud to children. It is not enough to get children to read the books over and over again. We need to be more aware of the cognitive processing that we want to encourage with the children as they get exposed to print.

The code emphasis comes across with diverse genres, spelling, daily writing, and modeled writing strategies. In Australia and New Zealand, they do cooperative reading and writing from age 5, from grade one. They use writing to teach reading as opposed to much of traditional American education where writing comes in at later grades, after supposedly reading has been taught. The modeled strategies, learning the phonetic analysis of words that comes about and is evident in the phonetic spelling, is absolutely critical to helping children learn to read.

Regarding the meaning emphasis, we need to get beyond asking silly questions of children. It is the five W questions that we usually ask, but we need to ask children about the inferential meaning of the books they read. We need to get children to talk about and extend the meaning. If they are reading a book like "Are You My Mother?", when you finish and close the book, the activity is not done. The challenge is provided by the teacher who says, "Let's make up a book called, 'Are You My Father?' Can you make that up?" They make it up together or they extend the concept of the book. They extend the language of the book, and the children get to produce it. Again, it is more of a cognitive challenge rather than a receptive kind of exposure to print.

One of the important things about the meaning emphasis that we ignore in our early grades translates to Head Start children is that we need to get children to think about the meaning of books and print even before they can decode. For example, we have been working the last 10 years on helping children understand the meaning of picture books.

When I was in Australia, Christina van Kraayenoord and I developed the Picture Book Comprehension Task into a research tool. We have a book about a dog that runs away and gets dirty. The owners find him and wash him. Sure enough, the dog runs away and gets dirty again. There is a story line in the pictures. We let children look through the pictures. We go back through the book a second time and we ask questions such as, "What do you think will happen next?" and "If the little boy could talk, what do you think he'd be saying?" The children who could provide good answers to those questions and demonstrated good understanding of picture books later were the children who had the most advanced reading.

We need a meaning emphasis even in picture books and elementary reading books because, too often, we wait for children to be able to decode before we emphasize the meaning. Part of the emphasis on phonics and phonemic awareness is because it is easier to measure than meaning for children who cannot read.

You still want children who do not read English as a first language, who do not have good print-sound correspondences, or who cannot decode to have the love of books and to have the meaning. I encourage you to read the pictures or to do picture book comprehension and make sure that children understand that there are things they need to infer, elaborate, retell, summarize, and think about in these stories. It is not just saying the words and closing the book that constitutes the act of reading.

A balanced curriculum should include familiar and novel books. Reading recovery in New Zealand capitalizes on repeated readings of familiar books. Children love to read the books; you know that from your children and other children. If you try and skip the middle pages of *Cinderella* or *Snow White*, they will not let you. They have memorized it, know it, and love it. That is a very important bridge to making the connections from cracking the code to understanding the particular words.

We need easy and challenging books. We need children to be able to have shared experiences as well as independent experiences. Freddy Hebert has worked on looking at types of vocabulary challenges. She notes that so many times children are presented with too many novel words in these early books. One of the virtues of some of the Australian and New Zealand books is that they have very limited vocabulary so children can practice. They also have some regular decoding words so that the vocabulary is informative for children. We also know from Nell Duke's research at CIERA that we need more variety of genre. We do not want to have simply fairy tales and narratives. We need to have functional literacy and expository text, even for kindergarten and 1st graders.

Assessment drives instruction in curriculum. The unfortunate thing is assessment demands are getting pressed younger and younger, and early childhood education is not sacred any longer. Texas has the Texas Primary Reading Inventory that was mandated, and then relaxed, and was supposed to drive the kinds of curriculum that would happen in K-2 classrooms. In Michigan, there is a Michigan Literacy Progress Profile, a battery of a dozen tasks that is supposed to be a teacher-administered diagnostic assessment.

To ward off pushing the SAT-9, the Iowa Test of Basic Skills, and other state-mandated tests younger and younger, we are trying to develop resources that are child-friendly and teacher-friendly. People talk about oral language inventories, letter-sound relations, phonemic awareness, concepts about print, decodable words, and oral reading fluency as measures for children in kindergarten through 3rd grade. We have to have some verification of children's ability to crack the code, so you can dictate a sentence to the class, "Today is Monday," and see if children can copy several of the phonemes and letters of that kind of a sentence. To the extent they can, they are at least identifying onset rhymes or initial consonants.

The meaning emphasis involves picture book comprehension, ability to answer literal and inferential questions, and abilities to do retelling. The retellings are probably one of the best and easiest ways to look at children's understanding of text and their own writing.

The difficulty in implementing a balanced literacy program in both Head Start programs as well as every other grade is that the program needs to be of fabric, not threads. One cannot put together pieces of things. One needs a coherent view, which means that the teacher has to have a coherent view of literacy development. One has to know where the child is expected to be at age 2, 3, 4, 5, and 6 and be sensitive to the kinds of accomplishments that are sequential.

There needs to be at least a theory of literacy in the instructional staff. It needs to be shared with parents, paraprofessionals, and others so that everyone is not doing their own thing and giving children contradictory messages. We need to have assessment and instruction intertwined and aligned. That is the beauty of some of the early assessments. When we have children read aloud and retell, their instructional and assessment activities are together.

The typical teacher says, "I have too many children. There are too many different levels. There are too many languages. I do not have enough time." That is the challenge. How do we individualize a literacy curriculum for children so we meet them where they are? The necessary teacher support is key, but there always needs to be staff support so that the staff have a coherent and integrated approach to teaching reading and writing within the program.

There has to be early identification through diagnostics and early safety nets. The beauty of the Reading Recovery Program is that they try to identify children in the first 2 months of school in New Zealand and give them immediate remedial help. What we know from all of our evaluations from summer school and remedial programs is that one gets the most success when one identifies and helps the struggling readers first and earliest. The children who are 4, 5, and 6 are the ones who can show the biggest gains in a reading recovery program or other kind of intervention program.

Tutors and volunteers are necessary because children need that one-on-one time and attention. The families and staff have to be involved. There has to be coherence among everyone about providing literacy instruction.

Instruction and assessments in reading are not cold, cognitive training. Partly what we are trying to do is make children excited about reading, writing, and communicative acts. One of the things that we have learned in K-3 is that if children are provided with these kinds of characteristics of intrinsic motivation in their literacy curriculum, they thrive.

Julie Turner's dissertation in *Reading Research Quarterly 1995* showed that teachers who offered more open-ended choices for children about what, when, and how to read had children who were more motivated. Teachers who allowed children to control some of their own reading had more motivated children. Teachers provided challenging tasks for every child so that every child was able to choose something that tested their limits. If one teaches to the middle, half the class is bored and half the class is frustrated. When one individualizes, everybody has a challenge. There was collaboration from the outset. Children helped each other read and write.

There has to be a focus on personal meaning. We have to connect to children's experiences, families, and things that motivate them so they have meaning and do not simply read other people's work. They can create and produce their own literacy.

The consequences of these early literacy instructions and assessments have to make children feel better. It has to promote their sense that "I can do this. I'm going to be good at it. I'm going to get better." When one has an optimistic sense of self-efficacy, one invests more effort. We saw it in these 1st grade classrooms, and one can see it with 4- and 5-year-olds in preschool and kindergarten classrooms.

Susan Neuman: What are the qualities of instruction in early literacy? What can we do or promote when we talk about early literacy in Head Start? I use the term early literacy as opposed to emergent literacy because it is. In other words, if we use the term emergent, one of the things we are suggesting is a readiness perspective or what some people have been calling a preliteracy perspective. We know that literacy is happening now. The minute children enter life, they are beginning to experience and show us literacy.

What are the qualities of wonderful instruction in the early years? Children's learning benefits through integrated instruction. We know that by compartmentalizing or fragmenting subject matter into reading or math, children will not understand those connections.

One of the things that we have to do better than ever before is integrated instruction. We know from research that children build schemas when we provide excellent instruction. We have to do that and take charge because they do not have enough background knowledge to build those vital connections.

While we know that social, emotional, and attachment theories are tremendously important, we need children to be not only active in terms of their physical world, but also mindful. In other words, we know that children's minds atrophy if we do not engage them actively. We need to strive toward learning needs in order to be active.

We must encourage high levels of teacher interaction to optimize children's learning. In many child care centers, I have seen the child care provider observing. Why do we observe? We observe because we want to interact at certain points. We do not just observe, stand back, and watch children engage. We need to know when to come in and when to leave. We also observe this during play. Play is critical in children's learning. It is not their work; it is what they do. We need to know that play is a central way in which children develop narrative. There are many research studies that talk about how narrative and how routines are developed through play.

Now when I go into the child care centers, I see less time devoted to play. We have to begin to show how important play is in terms of children's learning and development.

We need to have a new view of motivation: children develop motivation through competence. If I teach children a skill, they feel good. If I try to make them feel good without giving them a skill, I can try as hard as I can, but until they feel a sense of mastery and skill, they do not develop the sense of confidence and esteem that we know is important.

What are the quality early literacy instructions that we want to see for children? We have a great deal of research that indicates a literacy-enriched environment is critical for children in terms of their learning. The environment coerces behavior. That sounds very behavioral, but when we go into an environment where there are books and functional print and all those materials around, they encourage certain activities. We know that a literacy-enriched environment is not a littered environment; it is a very "planful" environment.

We have done a statewide assessment recently, state-by-state. In the regulations of many of the child care programs in states, toys are listed 10 times as often as books. In other words, children should have good toys in the child care environment and the quality of those toys are discussed repeatedly, but rarely are books discussed. What is a literacy-enriched environment? It is very basic. It is a library corner and stuffed animals. It is all child-centered and all at the child's height. It has lots of posters around the area. It has open-faced bookshelves that coerce behavior. When they are close to children, children grab books. They ask their provider to read to them. Often the interaction comes from the child, not the provider. Children slobber on and eat books, so in the library corner, we have a book hospital where books go to get better.

We know there is print everywhere in a literacy-related environment, but it is planful. For example, around the learning centers we have print. When children have their snack, they have a menu. Print at this stage needs to be in meaningful contexts. Teachers need to tell children what the next step is. They need constant repetition and involvement. They need to see it in a meaningful context, especially those children who have not had many print experiences outside the classroom. They need to see it all over, including in their block area. They need to see signs when they take attendance. They need to see signs when they have messages for one another. We need to consider planful ways of engaging the children. Otherwise, our print does not hold meaning because we have not laid the groundwork. We need to know that learning first progresses from the context, or seeing print in context, and then it can be isolated.

Our children demand intellectually engaging curriculum. We are studying Head Start children all across Philadelphia. We followed them during their 1st year, and we are now studying them during their 2nd year. No one ever talks about precocious Head Start children, and yet they are there. These children are reading not because they have been taught to read, but because they love print.

When these children go to public school, those children who go to certain schools will thrive and continue on the trajectory of success. Those children who go to schools where they begin with phonological awareness as if these children knew nothing, will no longer thrive.

Many of our providers are wonderful teachers, but many are not wonderful curriculum developers. We need to work on curriculum. Curriculum is a hard thing to do in order to engage them, but we have to do it because what they are good at is interacting with the children and conveying what they know to the children. What they are often not good at is the long-range planning that goes into what exactly is taught. We need clear, systematic, and scaffolded instruction. We need to encourage our teachers to do this. We know what predicts reading achievement; we know that children need not only to know and hear, but also to begin to comprehend and use, so we talk about oral language comprehension rather than development.

Vocabulary development is the single most important thing that we can all do. We also know that phonological awareness, while it is critical, is a subset of oral language comprehension. If we engage children in oral language activities with storybook reading and writing, we are helping children's phonological awareness. We see scaffolded learning where the teacher interacts. A number of years ago this would be unheard of in Head Start.

We know that children need activities that do not have them constantly sit for long periods of time. Teachers will often say that the children are not ready for reading. When we look at that, we say the storybook event was 40 minutes long for very young children. It was a long narrative instead of a situation where children could use predictable books, language-rich interactive learning, and integration of reading and writing.

This is a critical topic in Head Start. We often have not done enough with parent involvement as it relates to early literacy. One of the things we have done very successfully at Temple University is started book clubs. This brings in our parents when they drop off the children. We find that after 12 weeks of interaction through these book clubs, children's concepts of print are much higher. The scores on the Peabody Picture Vocabulary Test, in terms of receptive language, are much higher. When we involve parents more directly in the reading experiences, giving them models of what we think is important, often that connection becomes more collaborative and continuous. Those are some of the qualities of literacy instruction.

Wanda Roundtree: Would you please elaborate on preliteracy versus, for example, emergent literacy. Also, is it inappropriate to talk about very young children in terms of emergent literacy, or is it more the preliteracy for the early years?

Neuman: We are hesitant to use preliteracy and emergent literacy because it assumes a readiness perspective. I have done a tremendous amount of work in child care centers and Head Start programs over the years. One of the things I am finding out most about is that readiness perspective—that children have to show me signs of readiness in order for me to interact.

Comment: Given the fact that children live in a very print-rich environment, we may not necessarily be able to pinpoint specific examples of children's readiness or children's emergent literacy on development. Looking at it as early literacy, there may not be this predisposition or this level of readiness. There are varying levels of readiness, or varying levels of emergent literacy kinds of behaviors; we just may not be able to identify it at a given time.

Neuman: We have to begin to. As we begin to understand how children become literate, we begin to see signs. I am always amazed that once you show parents that this is literacy, they will begin to note and extend it; thus this is legitimate. We have one child who took a book and she said, "Once upon a time, once upon a time, once upon a time. There, I readed it." We all thought it was funny.

We want parents to begin to understand that it is more than charming. The fact that she "readed it," that this was her pretend reading, or her enactment of reading, is pretty neat. By saying it is, we are encouraging parents and teachers to recognize that what children are showing us is real and important, and we need to extend it.

We just completed a study of four different neighborhoods where we examined the print richness of those neighborhoods. We found there are 10,000 children living in one of the Philadelphia neighborhoods. We found, when we went to every single bodega and store to look for children's books and materials, there were only 33 children's books for the 10,000 children in this neighborhood. The 33 books were coloring books. When we say that children live in a print-rich world, we must realize that some children live in a much more print-rich world than others. It is critical when we talk about coercive environments and creating a literacy-enriched environment, that we give to those children who have not had such rich experiences an equal playing field.

Ellen Horvath: Are books monolingual English? What about bilingual books?

Strickland: The basic developmental sequence is the same regardless of the language. If the mother speaks Spanish, then she can read to the child in Spanish. There are some books that are dual language, and a parent can certainly read those. The whole process is relatively the same.

Horvath: In California, in the population with whom we were working, if one wanted the critical questioning to be going on, it would be more promoted within the native language.

Strickland: You are talking about ESL. It does not mean that this parent is illiterate in his or her own language. Most people outside of California would think that children should learn to read in their primary language first. They build on their oral language and then move into the written language, based on their oral language. Ultimately, the children would be bilingual-biliterate. If you are talking about moving from one language to another, that is a different thing, and it would mean much the same kinds of things that we are talking about, but targeting the second language.

Regarding the first question, it is a little confusing now that we are using different terminology. For years we used readiness, then we used emergent literacy, and now we are using early literacy. It is true that when the first research about emergent literacy came out, the very same argument that Neuman made was made for emergent literacy. All of this research about the young child showed us know that literacy is an emerging thing that starts much earlier than the point at which the child starts to read. That is how that term came about and the same distinction was meant. It was an emerging, evolving kind of thing and not fixed points.

Language is hard to deal with. In some textbooks, the same description Neuman gave for early literacy is given for emergent literacy. The field is changing, and that is what happened.

Parental Influences on Child Development

Children of Alcoholics: Challenges for Birth to Five Child Development Programs

CO-CHAIRS: Hiram E. Fitzgerald, Rina Das Eiden
DISCUSSANT: Paul Spicer
PRESENTERS: Rina Das Eiden, Eun-Young Mun, Penelope H. Brooks

Alcohol is the drug of choice in the United States. The number of individuals and families impacted by alcohol approaches 10-25% of the population, depending on how one counts impact. All other substances combined do not approach the negative impact of alcohol on individuals, families, the workplace, or the health care system. Studies of children of alcoholics (COAs) indicate that by 3 to 5 years of age, COAs have higher levels of hyperactivity, more negative moods, more problematic social relationships, greater deficits in cognitive functioning, higher levels of aggressive behavior, and more precocious cognitive schemas about alcohol and other drugs (Fitzgerald, Puttler, Mun, & Zucker, 2000). Moreover, they have a high likelihood of being raised in risky environments that include various forms of parental psychopathology, with or without coactive alcoholism, poor cognitive stimulation, high conflict and aggression, poor value structures, and low socioeconomic status (Zucker, Fitzgerald, & Moses, 1995). Clearly, as early as the preschool years, COAs have a fairly well organized system of dysfunctional behaviors that may be symptomatic of eventual coactive psychopathology, including alcohol abuse or dependence.

It is equally clear that such children can present special challenges for child development personnel and child development settings. The extent of such challenges is usually understated in both the scientific literature and the popular media. Therefore, the purpose of the symposium is to identify characteristics of children of alcoholics (from infancy to elementary school age), characteristics of their parents, and aspects of parent-child interaction in an effort to demonstrate the systemic impact of parental alcoholism on child emotional, social, and cognitive development. Data will be drawn from two ongoing longitudinal studies and one cross-sectional study that collectively span the first 6 years of life for children reared in high-risk environments, including alcohol abuse or dependence and considerable conflict and violence. Moreover, such children are highly likely to be eligible for enrollment in Early Head Start or Head Start programs based on family income.

Rina Das Eiden and Kenneth Leonard described risk trajectories for toddlers that include paternal alcoholism, depression, and/or antisocial behavior, in combination with disorganized patterns of maternal attachment. Parental characteristics in turn are linked to noncompliance in free play situations, common activity situations in child development programs. Eun Young Mun and her colleagues focused on preschool COA symptom severity in relation to paternal antisociality, maternal depression, and child temperament. Multiple risk factors exacerbate symptom severity. Penelope Brooks and Lawrence Gaines linked parental behavior directly with emergent cognitive structures as expressed through the child's expectancies about alcohol.

Collectively, the research reports bind the effects of exposure to substance using/abusing parents to early development and potential management issues for early education and care settings. Paul Spicer discussed the presentations with particular concern to their implications for culturally diverse children in child development settings and to the impact on child development programs when family risk persists.

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■ Paternal Alcoholism and Toddler Noncompliance

Rina Das Eiden, Kenneth Leonard

The purpose of the study was to investigate the impact of fathers' alcoholism and associated psychopathology, parenting behavior, family context, and infant temperament at 12 months of age on toddler noncompliance at 18 months of age. Studies of children of alcoholics have posited that these children are at higher risk for a number of maladaptive outcomes during adulthood and adolescence, and the origins of these risk trajectories may be evident as early as the preschool years (e.g., Chassin, Rogosch, & Barrera, 1991; Jansen, Fitzgerald, Ham, & Zucker, 1995). However, little is known about the early antecedents of the risk trajectories or about risk factors associated with alcoholism that may promote noncompliance among toddlers of alcoholic fathers.

The participants were 186 families who completed 12- and 18-month assessments in an ongoing longitudinal study of parenting and infant development. Families were assigned to one of two major groups: the control group consisting of parents with low current alcohol problems (n=90) and the father alcoholic group (n=96). The names and addresses of the families were obtained from the New York State birth records for Erie County. Parents who indicated an interest in the study were screened by telephone with regard to sociodemographics and further eligibility criteria.

Parental alcohol use was measured using a self-report instrument based on the University of Michigan Composite Diagnostic Index (Anthony, Warner, & Kessler, 1994). Antisocial behavior was measured using a modified version of the Zucker-Noll Antisocial Behavior Checklist (Zucker & Noll, 1980). Depression was assessed with the Center for Epidemiological Studies Depression Inventory (Radloff, 1977). Parent aggression was indexed by a composite of the Conflict Tactics Scale (Straus, 1979) and the Index of Spouse Abuse Scale (Hudson & McIntosh, 1981). The Bates Infant Characteristics Questionnaire (Bates, Freeland, & Lounsbury, 1979) was used to assess infant temperament. Parent-infant interaction consisted of a 5-minute play session, scored using rating scales developed by Clark and colleagues (1980), which led to the generation of three parenting measures: negative affect, positive engagement, and sensitivity. Finally, toddler noncompliance was measured during a 5-minute clean-up procedure at 18 months of age. Each 30-second segment was coded for quality of child compliance or noncompliance following guidelines developed by Kochanska and colleagues (1995).

There was a significant group by gender interaction effect on toddler noncompliance to maternal directives during clean up. Sons of alcoholic fathers displayed higher noncompliance (combination of resistance and defiance) compared to sons or daughters of control group fathers (*M*=.79 vs. .58 and .62, *SD*=.25, .29, and .35). Regression analyses were conducted to examine the 12-month predictors of 18-month toddler noncompliance within the alcoholic group. Child gender was entered first as a covariate, followed by infant temperament, parental depression and antisocial behavior, parenting behaviors, and infant attachment (avoidance and disorganization). For toddler noncompliance with mother, the model explained 32% of the variance, with infant gender and fathers' depression and antisocial behavior as the significant predictors. For toddler noncompliance with father, this model explained 40% of the variance, with maternal reports of infant temperament, mothers' negative affect during interactions, and infant disorganization with mother as the significant predictors.

Toddlers with alcoholic fathers who reported higher depression and antisocial behavior are at significantly higher risk for noncompliance at 18 months. Similarly, toddlers who displayed disorganized patterns of attachment to their mothers and those with mothers displaying higher negative affect during free-play interactions with children aged 12 months are at higher risk for later compliance. Taken together, results suggest that sons of alcoholic fathers are at significantly higher risk for a developmental trajectory toward problem behaviors, that this risk is evident as early as 18 months of age, and that several early predictors of this risk (fathers' depression, negative infant temperament, and the quality of the mother-infant relationship) are present at 12 months of infant age.

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■ Aggregated Risk Factors and Problem Behavior in Preschool Age Children of Alcoholics

Eun-Young Mun, Hiram E. Fitzgerald, Robert A. Zucker

Researchers agree that risk factors do not occur in isolation and that the aggregation of multiple risk factors is the critical indicator of maladaptive outcomes (Cicchetti & Toth, 1998). However, it is also suggested that some risk factors are more important indicators of poor outcomes than are others. Paternal antisocial alcoholism, in particular, appears to be a potent proxy indicator for various environmental and genetic risks that canalize children toward maladaptive behavior as early as the preschool years. Maternal depression also has been linked to problem behavior in children (Cicchetti & Toth). For example, children of depressed mothers have more persistent problems with behavioral and affective regulation during the transition from toddlerhood to childhood. Moreover, child difficult temperament has been proposed as: (a) a marker for neuropsychological variation that is strongly correlated to life-course-persistent antisocial behavior, and (b) a liability trait for the development of adult alcoholism (Tarter & Vanyukov, 1994).

In the current study, paternal alcoholism subtype, maternal depression, and child difficult temperament were selected as key risk factors that steer children of alcoholics onto the pathological pathways as early as the preschool years. Specifically, the potency of risk factors was hypothesized to vary depending on the familial context in which they occur, as suggested in the literature.

Using a high-risk sample of 294 male children aged 3 to 5 years and their biological parents, a nonstandard loglinear model was established to explain child temperament and behavior problems using paternal alcoholism and maternal depression. A base model (or null model) included the main effects of child difficult temperament (high vs. low), behavior problems (clinical range vs. below clinical range), and the association effect of paternal alcoholism subtype (antisocial alcoholics, AALs; non-antisocial alcoholics, NAALs; and controls) and maternal depression (high vs. low). This model was not tenable (Likelihood Ratio-X^2 (16)= 46.79, p=.01). In the next model, two directional hypotheses were added to the base model, resulting in a significantly improved and satisfactory fit (LR-X^2 (10)=17.46, p=.06; ≡LR-X^2 (6)= 29.33, p<.01). Low maternal depression predicted absence of both child difficult temperament and behavior problems among children of controls and NAALs. High maternal depression, on the other hand, predicted co-occurrences of child difficult temperament and behavior problems among children of NAALs.

These findings suggest that the absence or presence of maternal depression is more important for children of NAALs than for children of either controls or AALs. In addition, risk ratio analysis showed that each risk factor increased the probability of children having behavior problems in the clinical range. When paternal alcoholism subtype was considered, the percentage of children with clinical behavior problems was 19% for controls, 20% for NAALs and 42% for AALs. When both paternal alcoholism subtype and maternal depression were considered, the percentage increased to 26% for controls, 38% for NAALs and 60% for AALs. Moreover, when paternal alcoholism subtype, maternal depression, and child difficult temperament were considered all together, the percentage (risk) of children with behavior problems in the clinical range increased substantially to 71% among children of AALs, and to 73% among children of NAALs. When all three factors were considered for children of control families, the risk increased more minimally to 29%. For the control group, the presence of maternal depression and child difficult temperament did not substantially add to their risk of having behavior problems.

These results confirmed that each of the risk factors (paternal alcoholism subtype, maternal depression, and child difficult temperament) was itself a strong risk factor for child behavior problems. Furthermore, when each risk factor was considered in combination with the others, their total influences increased substantially. In alcoholic families, about 75% of children with a depressed mother and a difficult temperament had behavior problems in the clinical range. The results support the hypothesis that the effects of risk factors depend on the familial context in which they occur.

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■ How a Father's Drinking Influences the Family Environment

Penelope H. Brooks, Lawrence S. Gaines

In 1989, Christiansen, Smith, Rochling, and Goldman reported a landmark finding: alcohol expectancies in the 7th grade predict drinking onset age and problem drinking, thereby suggesting a causal role in later problem drinking. This finding and others, (e.g., Jahoda & Crammond, 1972) set in motion the quest for environmental variables that might have a causal role in creating those expectancies. The question has evolved and become part of the huge literature on family structure and its influence on the larger number of behavior problems exhibited by some adolescents, of which problematic drinking is only one. How are alcoholic families different, if at all? What do they do that propels their offspring into a group at high risk for later drinking problems?

The present study examined three dimensions of family life: (a) parental drinking in front of the child, (b) parental discussions about drinking, and (c) television. Parental drinking was viewed as a modeling issue—practices that mold the normative nature and role of drinking in the mind of the child. Parental discussions were viewed as a way of attempting to internalize values and attitudes. Television viewing had a two-fold role—that of being a distal measure of parental supervision, which, in turn, exposes children to more or less drinking, aggression, and so forth, and that of being an escape activity from family conflict.

The data for this report were collected as part of a cross-sectional study comparing cognitive development and drinking schemes of children of alcoholic, moderate drinking, and abstaining fathers. Two hundred and eighty families participated in interviews with the father, mother, and one elementary-aged child. The parents were queried individually on their drinking practices using the Comprehensive Drinker Profile (Miller & Marlatt, 1984), the degree to which their children witnessed drinking, and the amount of drinking-related discussion in the home. The children were asked how much they watched each of about 70 prime time entertainment television programs. Additional data on children's cognitive maturity and reasoning about drinking were also collected.

Most of the results were computed using multivariate analyses of variance, with SES and age covaried, and *t*-tests. Analyses of the number and frequency of television programs yielded a significant relationship with father's drinking. Since we had sample frequency counts on the number of drinking acts in the television programs, we could also examine the relative number of drinking acts witnessed by the children. This number was also significantly correlated with father's drinking. Analyses of the parental reports of drinking-related discussions with their child revealed an unexpected significant positive relationship between parental discussions and father's drinking: The more the father drank, the more drinking discussions were reported. Analyses of the child's exposure to drinking and alcohol were positively related to father's drinking status.

The following picture emerges of a family with an alcoholic father compared with moderate drinking and abstaining fathers: (a) there is more alcohol in the environment, (b) the children watch a great deal more television, and (c) there are dramatically more discussions about alcohol in the family. To this picture can be added results from other investigators' findings (e.g., Wolin, Bennett, & Reiss, 1988) concerning the presence of family rituals to see that the presence of drinking, while not necessarily causal, is certainly correlated with less structure and supervision. The increased presence of alcohol is also a stimulus for more discussions about drinking and alcohol—none of which seems to add to the child's ability to reason about alcohol or to their cognitive development.

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DISCUSSION
Paul Spicer

Of particular interest in these papers are the findings that suggest unique effects for specific risk factors, either in their interaction with other factors or in their unique contributions to subsequent problems. The determinants of alcoholism and conduct problems are multiple and complexly related, and the papers illustrate both how far we have come in understanding risk and also, paradoxically, how far we have yet to go. There are two areas of special concern. The first deals with the applicability of these findings to the culturally diverse populations that are commonly found in (Early) Head Start. The second concerns the implications of this work for thinking about (Early) Head Start interventions when behavioral change in the addictions remains a rather mysterious process.

The Effects of Parenting and Maternal Depression on Children's Social Competence

CHAIR: Suzanne M. Randolph
DISCUSSANT: Linda Beeber
PRESENTERS: Susan Hegland, Sally A. Koblinsky, Suzanne M. Randolph

Suzanne Randolph: This symposium will look at the impact of teen status, poverty, and depression on children's social skills. Susan Hegland will discuss her study, "Parenting and Children's Social Skills: Effects of Teen Parent Status, Depression, and Poverty." Sally Koblinsky and I will talk about a study that we conducted. Sally will emphasize maternal depression and its impact on parenting, and I will emphasize maternal depression and its impact on child outcomes.

Susan Hegland: This study comes from the Head Start transition data that we collected in Iowa, and my coauthor is Christina Emery, who was not able to be with us. First, I would like to give some background on our hypothesis. We have found many studies that say that teen parenting is a risk for negative parent and child outcomes. However, in many of those studies, the status of teen parenting has been confounded with poverty, depression, and ethnicity. Furthermore, many of these studies do not look at the long-term impact of teen parenting as children move into the early elementary grades. This was our goal in the present study.

Our purpose was to study the impact of teen parenting, depression, and poverty on parenting beliefs, perceptions, or practices and on children's social skills. Our prediction was that teen parenting would exert its deleterious impact only in combination with other risk factors. We predicted that the quality of teen parenting is a risk indicator and would mediate the relationship between maternal risks, such as teen parenting, and children's social skills.

The data come from the larger, longitudinal Iowa Head Start Transition Study of children from low-income families and their mothers as the children move through the early grades. The original study included 137 mother respondents. However, in order to address the hypothesis that teen parenting is only a risk factor in combination with other risks, this presentation excludes 36 mothers who were in poverty or were depressed, but were not teen parents. Thus, this sample includes 101 mothers and their 2nd-grade children. Ninety-five percent of the mothers were White, 61% were heads of single-parent families, 50% had prior Head Start experience, and 13% lacked a high school diploma. To test the hypothesis, a cumulative risk index was created: (a) no risks (43% of mothers), (b) teen parenthood only (19% of mothers), (c) teen parenthood plus depression or poverty (24% of mothers), and (d) teen parenthood, depression, and poverty (14% of mothers). When data collection occurred, the average age of the mothers, both those who had been teen parents and those who had not, was over 30 years old. We went into the same classrooms and neighborhoods and matched children on gender to get a non-Head Start sample as well.

Being "teen parents" was defined as being under age 20 at the time of birth of the mothers' first child. Regarding depression, instead of calling it parental depression, my clinical colleagues tell me we should call it level of depressive symptomology. At any rate, the depressed mothers were those who attained a score of 16 or higher on the Center for Epidemiological Studies Depression Scale (CES-D). This could be a conservative measure, as some of my colleagues have suggested, because we administer the CES-D orally rather than in a self-administered fashion. Thus, social bias might have affected the results, making the parents appear less depressed than they would have using another administration method. However, we felt that the literacy levels were such that we needed to administer the CES-D orally.

About ⅓ of the parents had low incomes; meaning family income was below 100% of the poverty guidelines. To measure parenting beliefs and practices, we used the Parenting Dimensions Inventory. However, in this all-White sample, we found the internal consistency measures for the Parenting Dimensions Inventory very low. Thus, we re-factor-analyzed and produced, based on Baumrind's work, a subscale that we call Authoritative Parenting. Some examples of Authoritative Parenting statements include: (a) "I encourage my child to talk about his or her troubles;" (b) "Once I decide how to deal with the misbehavior of my child, I follow through on it;" (c) "I encourage my child to express his or her opinions;" (d) "My child and I have warm intimate moments together;" and (e) "I encourage my child to be curious, to explore and to question things."

For child measures, we looked at children's social skills in 2nd grade. In order to avoid method bias, we needed to get those ratings not from the parent, which too many studies have done, but rather from the teacher. Children's social skills were measured by teacher ratings on four subscales of the Social Skills Rating System: (a) social skills, (b) internalizing, (c) externalizing, and (d) hyperactivity. A child with higher levels of social skills would be a child whose teacher said he or she ignores peer distractions when doing class work. This would be a child who appropriately questions rules that may be unfair and accepts peers' ideas for group interactions. Thus, a higher score signifies good social skills. However, on the internalizing subscale, a high score is not considered a good outcome. This would be a child who appears lonely or acts sad or depressed. For the externalizing subscale, a high score is also an indication of a problem. This is a child who fights with others and gets angry easily. On the hyperactivity subscale, a high score is also a negative outcome. This would be a child who is easily distracted and who disturbs ongoing activities.

In terms of our procedure, the demographic data were collected during spring home visits. We conducted these interviews orally, in order to prevent literacy problems, and in the parents' home. The parents received $20 as an honorarium for spending 1½ hour to complete these and other measures. Children's measures were completed by teacher ratings in the spring. The data were collected when the children were in second grade, and teachers were paid $5 per child for rating the children's skills.

We found that parents with more risk factors reported that they believed in and practiced less authoritative parenting. For the children of these parents, their teachers rated the children as showing lower levels of social skills, higher levels of internalizing, higher levels of externalizing, and higher levels of hyperactivity. All of those results were statistically significant. Our sample size, however, is too small to test the effects of individual differences between these four groups. Correlations showed that mothers with more risks expressed lower perceptions of their parenting.

Cumulative risk was also predictive of lower levels of social skills and higher levels of internalizing, externalizing, and hyperactive behaviors. Only internalizing was statistically significant. When looking at the whole sample of 137 where the risks are interchangeable—any one, any two, or any three, externalizing also reaches statistical significance.

To test the hypothesis that parenting was the mediating factor between risk and social skills, we used hierarchical regressions. We found that parenting perceptions partially mediated the relationship between risk and child internalizing behaviors. Although the results were in the expected directions, no statistically significant mediating effects were found between family risk and the other measures of social skills.

Our conclusion was that it is the cumulative risk factor, rather than any one risk alone, that impacts both parenting and social skills. However, we wanted to note that 30% of the sample that were teen parents were neither depressed nor in poverty by the time their children were in 2nd grade. Thus, our conclusion is that teen parenthood is not a life sentence for either the mother or the child. Risks that exacerbated the impact of teen parenting were poverty and depression. The buffers appeared to be those who were teen parents but neither depressed nor in poverty and those teen parents who had achieved a high school diploma and were parenting in two-parent families.

We are looking at 2nd grade children's social skills in the school context rather than in the home context. This may be significant because they are interacting with a different adult. Many of the studies on the impact of teen parenting and depression have looked at the child's behavior when the mother is present. By 2nd grade, the child has had a lot of experience interacting with other adults other than the parent. Thus, it is possible that our results may be different for school-age children than for preschoolers. School-age children may be more buffered from the impact of parenting risks than younger children. As Head Start and other practitioners have done for many years, we need to look at multiple risk factors, not just the impact of one risk alone, and multiple buffers for teen parents.

Sally Koblinsky: Four years ago, Suzanne Randolph from the University of Maryland, Debra Roberts, our postdoctoral fellow who is now at Howard University, and I began a study that was supported by the U.S. Department of Education to look at the impact of community violence on Head Start families.

This research not only looked at the effects of violence on children and families but also the strategies that both parents and teachers used to try to protect their children and to identify predictors of resilience in these high-risk neighborhoods. We used the data to develop an intervention for Head Start teachers, which we implemented last year, to help the teachers cope with the violence-related stress that children were experiencing in the classroom. The study that I am reporting on is actually a much smaller study that was done by one of our Master's students, which looked at the relationship between maternal mental health and parenting in these high-risk neighborhoods with African American families.

Community violence has become epidemic in many low-income, urban neighborhoods and has been a particular threat to African American children and youth. Head Start families confront violence both directly when they are victims of robberies and assault and indirectly when they regularly hear gunshots and know victims of violence. It is a pervasive aspect of the community. The Head Start centers where we do our research have bulletproof glass, and most of the teachers are afraid to take the children out into the playground.

We investigated a number of factors that might influence the parenting of children in these violent neighborhoods, but we were especially interested in maternal mental health. We were interested in both depressed mothers as well as mothers who demonstrated positive mental health and adaptive coping despite their residence in these high-risk neighborhoods.

There is an existing literature on depression, however much of it is with White, middle-class families. It suggests that depression compromises parenting in that mothers who are depressed would not have the psychic and physical energy to nurture, to pay attention to, to exhibit positive control with, and to nurture optimal development of their children. Although there have been a number of studies that have looked at this relationship between depression and parenting, we found few studies that looked at the relationship in African American families, especially in high-violence neighborhoods.

The purpose of this study was to compare the parenting of depressed and nondepressed African American caregivers of preschool children in these communities with a particular focus on three parenting styles: (a) authoritative, (b) authoritarian, and (c) permissive. Our subjects were 207 African American caregivers, the majority of them mothers, but also grandmothers and other female relatives who were raising a Head Start child between the ages of 3 and 5. All the mothers had low incomes, meeting the criteria for eligibility to have a child in Head Start. They all lived in high-violence neighborhoods. We used uniform crime data from police departments to identify these neighborhoods, and then we obtained confirming reports from the Head Start teachers and administrators and the parents that these were indeed neighborhoods with a high level of violence. The majority of mothers had nearly finished or finished high school, and there was a range in age with the average mother approximately 30 years old. About ¼ of the parents were either married or living with a male partner, while the remainder were either single or living with family members in other arrangements.

We invited mothers to participate in the study through their Head Start centers. We have had a long, collaborative relationship with Head Start centers in Washington, DC and Prince George's County, Maryland. Fortunately, it has been a positive relationship, and we have had a good turnout for the studies that we have conducted.

We had a long interview that took about 1½ hours and included a number of measures. The three measures that we will focus on are: (a) the Center for Epidemiological Studies Depression Scale (CES-D), (b) the Parenting Practices Questionnaire (PPQ), which looks at the three global parenting styles as well as specific parenting behaviors, and (c) the Parenting Dimensions Inventory (PDI), which has four subscales that look at the authoritative style of parenting, i.e., nurturance, responsiveness, positive control, and consistency. Mothers were interviewed in their Head Start centers and were paid a small stipend. Half of our interviewers were African American, and half were Caucasian.

What did the results reveal? First, about 45% of our sample exhibited depressive symptomology, meaning they scored 16 or above on the CES-D. The depressed and the nondepressed group were similar on almost every demographic factor except that nondepressed mothers were more likely to be employed and twice as likely to attend church at least once a week.

How did the depressed and nondepressed mothers differ in their parenting practices? As predicted, nondepressed mothers were significantly more likely to use the global authoritative parenting style. On the PPQ, they also scored higher in warmth and easygoing good-natured behavior. On the PDI, there were significant differences, with the nondepressed mothers being more nurturing, more responsive, and exhibiting more positive control. However, we had a low alpha on that subscale, so we dropped it from this presentation.

There was one area that did not differentiate the mothers on the authoritative scale: consistency. We found that mothers in violent neighborhoods, whether or not they are depressed, are consistent in their parenting. They have rules that enable their children to be safe, and they follow through with those rules. The children know they are never to play outside or in particular areas. If they hear gunshots, they know to leave the windows, get on the floor, go to the bathtub, or follow whatever the safety plan is. Mothers are good about following through with sanctions if children break the rules and so forth. Thus, consistency does not differentiate the groups.

With respect to authoritarian parenting styles, differences were clear. The depressed mother was more likely to both the authoritarian style and significantly more likely to exhibit verbal hostility, use corporal punishment, use punitive behaviors in disciplining their children, and be directive in issuing orders to their children rather than allowing more independent behavior.

With respect to the permissive parenting behaviors, depressed mothers were significantly more likely to use the global permissive style. As I mentioned, there was no difference in a subscale of following through. Both depressed and nondepressed mothers were equally likely to follow through with sanctioning their children. However, depressed mothers were more likely to ignore children's misbehavior and to lack parenting self-confidence than the nondepressed mothers. Overall, the nondepressed mothers were significantly more authoritative and less permissive and authoritarian than their depressed counterparts.

With respect to practice implications, almost half of our sample exhibited depressive symptomology. This certainly underscores the need for both mental health and parenting interventions for this group of African American caregivers in violent communities. Fortunately, Head Start has demonstrated a commitment to increasing its emphasis on mental health. This is critical because our centers report little access to mental health services. While there are psychologists and social workers that come to the program, most of them focus on children's behavior problems; there has been little outreach to troubled parents.

Granted, this is difficult to do. Even the teachers in our program are reluctant to make home visits. They mentioned that they used to live in these neighborhoods but have moved out. Many of them do their home visits in teams. They feel they have to call the police to alert them to the fact that they are going to be in a particular apartment complex. This is stressful.

Teachers note that they also are in need of mental health counseling. Many of them are spending their own money to get counseling, both to deal with the stress and because they feel that they are becoming callous to all of the deaths. As one teacher told us, they talk about people dying as if they were pets dying.

Regarding the high level of depressive symptomology, it is also important to intervene because as parents pointed out, when one is depressed, one is more likely to use substances, to use alcohol, and so forth. Even parents talk about the importance of interventions for this problem. Interventions need to be intensive and home based, because it is difficult for parents in these neighborhoods to join social support groups. We should also take advantage of a number of strong, resilient parent leaders in these communities. In particular, we found a cohort of grandmothers in these communities that had remained in the communities because they had grandchildren there and were effective in helping mothers through these difficult times. If there were some way to train and marshal the efforts of these grandmothers, it would be a great help to this depressed cohort.

Additionally, we thought about some type of Head Start buddy system, pairing more resilient, resourceful mothers with mothers who are having problems because the social support network has dissipated in these neighborhoods. In the past, grandmothers talked about how everybody parented everyone's children, but now the primary protective strategy is that mothers stay to themselves and stay out of everyone's business. They are afraid to talk about who is causing the problems or the way the community might unite to rid themselves of drug dealers and so forth because of fears of retaliation. The network that has traditionally sustained African American families in low-income neighborhoods has been destroyed by the violence. Thus, it is important, again, to try to tap into these more resilient, activist caregivers to lend support to depressed mothers.

Churches, of course, could be a source of support. Again, it was interesting that we saw a relationship between depression and employment and church attendance. Of course, we do not know the direction of that relationship, whether or not employment and church attendance buffer mothers from mental health problems or whether the depressed mothers are just too down to have the energy to go to church or look for a job. However, we need to keep looking for these protective factors.

It is also important to look at values like spirituality and communalism—strong Afrocentric values—that have maintained families in the past. Even if they have been undermined by violence, we feel that it is possible to revive some of these values. Mothers use prayer as a protective strategy. They are spiritual, even if they are not attending church.

It is important that early childhood educators understand this relationship between depression and parenting in order to have more empathy for parents. It is also important for interventionists to understand these neighborhoods and the contextual factors as they design interventions. As I mentioned, neighborhood conditions preclude certain kinds of evening meetings and so forth, and the violence itself is probably a major contributor to depression. One parent said, "Just fixing up this neighborhood would make me feel better, safer, and more in control. Fathers, mothers, police, and teachers—they have got to work together. Scan the neighborhoods, fix the parks and playgrounds, and clean this mess up. We have all got to roll up our sleeves, if we are ever going to feel better."

With respect to the research implications, they echo the practice interventions. Obviously, it is important to continue to focus on strengths, if we are looking for factors that predict resilience. It is also important to conduct longitudinal investigations to look at the impact of depression on parenting. We are using a measure that examines how parents felt over the last week. It has been interesting to us to see some variance in depression. Parents talk about feeling generally down, but when it gets to the end of the month, they have no money, and their partner may not be around as often, for example, and they may feel especially down. Thus, it is important to look both at the nature and the duration of depression. Are these long episodes or relatively brief episodes? When do they come in terms of the child's development? Understanding how the duration, the timing, and the nature of depression affect both parenting and child outcomes will enhance our interventions.

Randolph: As Sally said, we are jointly directing this project, which was funded by the Department of Education. While she talked about maternal depression and parenting, I will focus on the children and their outcomes. Susan already has mentioned many of the measures that we used, and Sally set the context for the project. My specific purpose is to talk about the comparison we did of developmental outcomes of African American Head Start children with depressed and nondepressed mothers and other female caregivers, particularly with respect to their social skills and behavior problems.

Sally used data from 207 of the mothers from Year 2 and Year 3, because she was using parenting measures that were collected in those years. I used the full sample composed of 311 children and their caregivers, 270 of whom were mothers, 31 were grandmothers, and 10 were other female relatives. We have the full complement of the sample: mean ages, mean education levels, and the percentage of boys. Those who had heard gunshots frequently in the last year tended to be similar to those in the substudy of the Year 2 and Year 3 samples.

With respect to the methods, we used the CES-D to measure maternal depression with the 16-point cutoff. We used the Social Skills Rating System—the preschool version by Gresham and Elliott, which is comparable to the second grade Social Skills Rating System that Susan discussed. It has items that allow one to create four subscales: (a) cooperation, (b) responsibility, (c) assertion, and (d) self-control. We also used the parent report of the Child Behavior Checklist (CBCL). We interviewed female caregivers in their Head Start centers with the 90-minute interview or protocol in which these standard instruments were embedded.

In terms of our results, 39% of this sample were depressed, and 61% were nondepressed. We have 3 years of data. In the 1st year, we learned that the centers we had picked based on neighborhood crime statistics were busing children in from elsewhere. Thus, the data look a little different because of who was in the sample. Later, we began to do more analysis with only Year 2 and Year 3 data. We also noticed that the percentages of depressed and nondepressed caregivers did not differ for the mothers of boys and girls. The percentages were exactly the same for both the mothers of boys and the mothers of girls.

With respect to social skills, again, we looked at mean subscale scores using the SSRS. It should be noted that even though we found some differences on the subscale, they are relative to what the scale says is within the average range. Thus, all of these children were within the average range for preschool children as determined by the Social Skills Rating System manual itself. We did not find any significant differences between the nondepressed and depressed groups for the cooperation and responsibility subscales. However, there were differences with respect to the self-control and assertion. We found that the children of nondepressed mothers had higher scores on the self-control subscale than did children of depressed mothers and caregivers. We also found that children of nondepressed mothers had higher assertion scores as compared to children of depressed mothers.

With respect to behavior problems, we looked at the internalizing and externalizing subscales. As Susan mentioned, internalizing includes behaviors such as being fearful, shy, anxious, and/or withdrawn, and externalizing includes behaviors such as acting out, being aggressive, and/or talking loud. We compared the nondepressed and depressed groups on those subscales and also looked for differences between boys and girls. In another study that we conducted, we found that boys had higher rates of internalizing, and girls had higher rates of externalizing than would be predicted by the current literature. Thus, we wanted to look at these data separately for boys and girls, though we have not done the 2 x 2 comparison of them yet.

With respect to boys, 36.8% of the boys of depressed mothers show internalizing behavior problems at what we call the severe level. We selected one standard deviation above the mean for the standardization sample to indicate this severe behavior problem level. Thus, with respect to depression and its relationship to these behavior problems, significantly, the boys of depressed mothers show higher rates of severe behavior problems as compared to the boys of nondepressed mothers (20.5%). We found that 27.7% of the girls of depressed mothers are at the severe behavior level, which is significantly greater than the 3% of girls of nondepressed mothers.

With respect to externalizing behavior problems, we found the same pattern. The boys of depressed mothers have higher rates of severe behavior problems as compared to the nondepressed (35.1% in the depressed group, and 19.3% in the nondepressed group). With respect to girls, data follow the same pattern. Notably, 60% of girls of depressed mothers as compared to only 35.1% of boys of depressed mothers show these severe externalizing behavior problems. Again, we have not statistically tested that yet. For girls of nondepressed mothers, 27.7% show severe externalizing behavior problems.

The practice implications echo those that Sally mentioned, although we should also think about increasing classroom-based mental health interventions. Sally stressed home-based interventions because of the nature of the sample—they are isolated and shut-in, according to focus group mothers. However, these children are going to Head Start. In a recent survey conducted by the National Center on Learning Development at the Frank Porter Graham Center, it was found that the primary barrier to preschool teachers or early childhood educators managing their classrooms seemed to be behavior problems. Thus, it becomes increasingly important to not only think about the home-based mental health interventions, but also classroom-based interventions.

It is crucial to design culturally appropriate and family-focused interventions and to stress the need for these interventions to be simultaneously provided to caregivers and children. Oftentimes, one finds that there is a focus on parenting and enhancing the parenting skills with little attention to reducing children's behavior problems or promoting their social skills. We need a more comprehensive and intensive preventive intervention approach. We need to increase early identification of child and family mental health problems and implement preventive interventions. This is difficult for the age group that we are talking about, but we are becoming increasingly skilled at doing that. Transdisciplinary, multidisciplinary, and interdisciplinary approaches are needed in order to be able to achieve this objective.

The role of teaching parenting skills is not just for the parent education coordinator or person involved in that component of Head Start or other early childhood education programs but also for other professionals or paraprofessionals who are involved with parents as they relate to them in whatever appropriate context. We need to increase early childhood educators' knowledge and ways of teaching those parenting skills. We also need to increase gender-sensitive strategies. As these data as well as the data that we recently published suggest, it seems that 60% of the girls of depressed mothers are exhibiting externalizing problems. This may help us to understand or begin to develop studies that also address the increasing female involvement at all ages in crime and violence-related events. We also need to develop programs that build on cultural and individual strengths.

With respect to research implications, we need to look at protective factors. Seventy-two percent of these children are in what we would call high-violence neighborhoods, yet they all are not exhibiting these severe behavior problems. As suggested by the data, both groups were in the average range for social skills. Thus, children may have some strengths that we could build on. It is not uncommon to find that the child who is very popular, social, and outgoing is also the behavior problem in the classroom. We all understand that. However, from a research perspective, we need to do more and give more attention to those social skills and social competence. There is an abundance of literature on children's behavior problems and ways to reduce them, but it needs to be complemented in some way by the social skills data as well.

We need to investigate the role of cultural factors and the characteristics of resilient caregivers and children using cross-informant reports. For example, we used the parent report, and Susan Hegland used teacher reports in her 2nd grade data. We have both teacher and parent data, but for this conference and this discussion we did not include it. We will be looking at that as well as behaviors across contexts.

We also need more observational studies and qualitative approaches. We need to look at children in their settings and begin to develop tools that enable educators to identify children early and researchers to validate what is happening as well as to understand the underlying processes that may be accounting for the score of 60 or 70 on the CBCL or the score of 16 or 18 on the SSRS.

Finally, we need to examine the intensity of violence exposure on the nature and severity of caregivers and children's mental health problems. All we have in our data is that they live in a high-violence neighborhood, hear gunshots on a regular basis, and may have a family member who has been exposed to violence. We have about 20 questions that talk about that exposure, but we also need to know whether they are witnesses, whether they themselves are the victims, whether they have family members who have been recent or past victims, and what this contributes to the nature and severity of their depression or of children's behavior problems.

Linda Beeber: Rather than repeat and go back over the strong findings from these three papers, I will try to link these papers to what is in the literature and what we know so far about depression and to try to facilitate our discussion at the end.

I will focus on: (a) the recognition and labeling of what we call depression and various related aspects; (b) the specific relationship of violent environments, poverty, and adolescence to depression; and (c) the significant links between depression symptoms in mothers and outcomes in infants and children.

First, I would like to talk about recognition and labeling of depression. All sad mothers are not depressed, nor are all depressed mothers necessarily impaired parents. We heard that from the Randolph study in particular. Specific qualities are necessary for depression to become a problem in the parent who is exhibiting symptoms. We know from the literature that prevalence and persistence of symptoms is important. That is what makes our longitudinal work important because people can become depressed for short periods of time or persistently depressed for long periods of time. In the Randolph and Koblinsky studies, however, 45% of the sample were found to be depressed, which was consistent with what has been found in poverty samples in particular. In nonpoverty samples, the rate of depression runs about 15% but increases in low-income samples with 40-60% of the people scoring above 16 on these screeners as well as in the more specific diagnostic sense. This means that infants and children growing up in poverty have a great deal of exposure to depressed parents. That is one outcome of which we need to be aware.

The persistence issue is crucial because most of our work is done on women right now, and the longer a woman is depressed the more likely she is to reach diagnostic significance. From large primary care medical outcome studies, for people from middle-class backgrounds as well as people with low-incomes, we know that if a person has depressive symptoms for a year, 25% of them will reach diagnostic levels that are much more severe and much more specific by the end of that year. That 1st year of symptoms is crucial in these women's lives, and we need to keep that in mind.

Koblinsky mentioned the church finding. For a while, that finding gave people the idea that African Americans were not as depressed as White people, because those were the two groups in which most of the epidemiological work has been done. However, they found that this was an artifact of recruiting many samples through churches. When researchers moved outside of churches, they found, indeed, that African American women, in particular, had quite a bit of symptomatology. Nonetheless, this raised the question about the antidepressant effect of belonging to church. It is certainly a question to be investigated further because it is one that is interesting and important, particularly from the standpoint of designing an intervention.

In order to reach a score of 16 in Hegland's study, one has to have a large number of symptoms or have significant intensity in six different dimensions of this instrument, which includes cognitive functioning, social functioning, body and somatic functioning, motor speed, and so forth. A score of 16 is not something to be disregarded because it is not a formal medical diagnosis of depression. In fact, in Hammond's work, she used mothers who had reached diagnostic criteria but found that for mothers who had not reached diagnostic criteria, the outcomes both for them and for their children were even more significant because they were not in treatment. Thus, we cannot just discard scores because they do not reach a particular criterion.

The third point that Hegland discussed was the combination of depression with other risk factors. These have profound implications because the combination of prevalence, persistence, and intensity in mothers appears to create and recreate the risk factors that they themselves went through for continuing or worsening depression and, hence, increases the risk that their infants and children will become depressed or running into other risks. This is a powerful link between research and findings, and it puts Head Start in a wonderful position to be a link between mothers who have depressive symptoms and treatment facilities.

The second area I will talk about is violence, poverty, and adolescence and what we know in the literature about these factors and depression. First, not all stressors produce depression. Second, stressors for women have been shown in research to be different than those for men. Meanwhile, variations across ethnic and racial groups are largely unknown. These two papers here were just wonderful in that they took a look at that, but we still do not know a lot about this. Given what we do know, there are certain characteristics of violent communities that produce stressors that have a direct relationship to depression. These are social isolation, exit or loss events, unpredictable events, and then the problem-solving structures or values that are characterized by the immediate discharge of tension. This leads to particular chronic strain elements, which are directly related to depression from what we know about research.

When one looks at the biological hypotheses, some are quite plausible. The most plausible is the elevation in cortisol over time and what that does to the nervous system. If one thinks about violent communities and exposure to violence over time, there is a strong connection here between what we know biologically goes on in humans and how the environment relates to that. If we think about Head Start as a positive force, then we can look at isolation, for instance, and Head Start as a socializer or outreach with people visiting people in their homes. We can think about Head Start as a source of compensatory support during exit and loss events. Particularly in the Head Starts that I work with, the program often becomes the sustainer when the partner leaves, the mother dies, or there are a variety of significant exit events. Head Start also can serve as a predictable place in an unpredictable life as well as a reeducator of the mother and an educator of the child in terms of this value about immediate discharge of tension and the creation of chronic strain events that come out of that kind of problem solving.

On the second issue of poverty, Brown in England has produced some wonderful studies recently on poverty and depression in mothers, particularly single mothers. He has elicited two sets of stressors, mostly being humiliation experiences. These are experiences such as putdowns that can come from infidelities, from misbehaviors of the children, criticism by the school about the child, and so forth, which puts Head Start in a critical position in terms of not humiliating mothers, but rather creating an opposite experience for them.

The other event that Brown has talked about and validated quite nicely is what he calls an entrapment event. An entrapment event occurs when one is living in a community and does not have the option of getting out of that community, when there is a chronic illness in a partner, a mother, or other dependents, or when there is a disability of the child. That is where the disability services that Head Start provides are so crucial to these mothers in terms of prevention of depression.

One of the key issues coming out of the literature in terms of adolescence is the relationship between social support systems and depression and the high incidence of depression when the support system is highly conflicted. For adolescents, the fact that they themselves are often entrapped or entangled in conflicted support systems puts them in a bad position in that they cannot leave this situation nor get away from the conflicted relationships in which they are embedded. Head Start can often become both the way out for them in terms of developing independence and autonomy, but also become in a sense an intervener in some of these conflicted relationships. As most of us who work in Head Start know, grandmothers can be wonderful community organizers, but sometimes they can be entangled with the adolescent mother in a way that is not working well for that family.

The third area on which I would like to focus is depressive symptoms and infant-child development outcomes. While the mother may live in a disadvantaged environment, the mother is often seen as the environment of the infant and, to a lesser degree but still crucial, of the child as the child develops. Therefore, the depressed mother herself can be a disadvantaging environment for the infant and the child. Some depressive symptoms are worse than others. There are three issues I will focus on.

First, the constriction of affect or feelings is a crucial depressive symptom that appears to have a large impact on the infant in particular, but also on the child as he or she gets older. Mothers may have a rigid or narrow expression of feelings, which comes with depressive symptomatology, and, in particular, low joy, little playfulness, and a high irritability level with the child. That is the characterization of depression in these mothers. It appears to create a narrow sphere of interactions with the child, and they become routinized around a few key areas, which tend to be either physical care for the younger child or the infant or control of behavior. From the Koblinsky findings, one sees the idea of the mothers being highly restrictive. The Hegland findings described depressed parents as having lower authoritative parenting styles. We can link some of these things. Although we would not link them directly, those might be possible outcomes.

The second issue is construction of cognition. This is something we do not talk about. We tend to overemphasize the mood aspects of depression, but it also has a profound effect on cognition. In particular, the depressed person feels self-defeating and harsh toward the self and, as a consequence, tends to see the child overpunitively. This reflects more of how the mother feels about the self than about how the child is actually behaving. In a sense, this confuses the child because the behavior is not related to the amount of criticalness and harshness that is coming from the parent. This was picked up nicely with Koblinsky's finding about mothers' nonreasoning discipline and also the lack of self-confidence in the parenting process, as well as Randolph's findings about the behavior problems in both females and males, which is significant in this particular study.

The third issue is disruption of attention. Depression appears to produce in mothers short, nonsustained interactions with their infants and children, a lag in responses to their children's cuing and over- and understimulation patterns with their children. This is crucial because interactions are not cued to the child's needs, but rather cued to the mother's attention span. In some cases, it has been well documented to lead to either disinterested or aversive responses on the part of the infants. We are seeing that in our data now. We have actually seen infants turn away from the mothers in our observations, which are an hour long. There is a great deal of hostility or almost the opposite response—withdrawal—in the child who is interacting with the depressed mother. Koblinsky found this in the depressed mother's lack of follow-through. That can come as easily from losing attention to the discipline process as it can from a lack of interest. The mother's attention cannot be sustained long enough to do follow-through or to pay attention to what the child needs next.

The Hegland finding of low social skills and the Randolph finding of the externalizing, internalizing, and loss of sense of self-control come from these kinds of pairings of children's needs with mothers' symptoms. One of the important implications for Head Start is that educating parents in parenting skills will not necessarily overcome these processes. In fact, it may lead depressed mothers to feel an even greater sense of failure because now they know what they are not doing well, yet they cannot get themselves to change the symptomatology that is driving these "mistakes." I have often seen depressed mothers withdraw from parent activities rather than fail again at becoming a good parent. They want to be a good parent, but they cannot do it in some cases. Head Start has a role in helping mothers get mental health services. The performance standards that have brought this to the front burner are right on target.

These three papers are also on target and address issues at the center of what is an important mental health concern. I would like to reinforce the implications raised by these researchers related to longitudinal studies to study the patterns of depression, how depression waxes and wanes, what the persistence and intensity of depression is over time, how depression presents in different contexts, how it presents in violent contexts, and what the cultural and ethnic variations are in the presentation of depression. We know little about these questions. What are the specific stressors in addition to the ones that we do know about? There are probably other stressors that are related directly to the appearance of and exacerbation of depressive symptoms.

Regarding intervention effectiveness, Randolph mentioned simultaneous child- and family-focused interventions, an excellent approach to work with the dyad or with many people. That is crucial for early recognition effectiveness. As we are finding in our research, the women who need it the most are the hardest to get into intervention studies. Thus, we have been working on a series of aggressive ways to get them involved.

We also need to look at gender-specific types of interventions for boys and girls and for mothers and fathers. We have not touched on the issue of fathers' depression much either, which also exists. Cultural and ethnic interventions that improve resilience as well as deal with depressive symptoms also have not been done widely.

AUDIENCE COMMENTS AND QUESTIONS

Question: Have any plans for follow-up interventions that target parents from this study?

Randolph: We actually proposed to do an intervention for parents, but our qualitative research told us that we had to reach teachers first. We developed a culturally specific intervention that was Afrocentric. These were all African American teachers with African American children. The intervention related to teachers recognizing the problems, sharing their experiences and their strategies for dealing with these issues, and connecting them to community resources.

We learned that Head Start does not have the necessary mental health resources. These teachers told us over and over that there is one mental health professional serving 60 classrooms. They needed to feel like they had some strategies to reach mental health professionals or mental health resources that were in and around their communities, such as the DC chapter of the Association of Black Psychologists or the DC Mental Health Association.

We tried to give them ways that they could build community among themselves—because they were from DC and a suburban Maryland county—and use each other as a support group but also connect with their communities. The idea of the intervention was that at the end of this 5-session period, they were to have a community/family day celebration with parents and children as well as the resource people. The resource people had exhibits and gave talks to parents and children about what was available right there in their own communities. Although we were outsiders, we helped them to connect in that way. It seemed as though even at the end of the 1st or 2nd session, the teachers felt relieved because there was someone listening to them. It will take time because the next year there will be a different group of parents and there are many challenges.

We need more partnerships. It can be university-Head Start partnerships, but it has to be others in the community who are trying to bring these services and broker these services for the teachers as well.

Koblinsky: In the two Head Start sites in which I am working, about 1/3 of what we do is geared toward the staff, and that was at their request. They were angry that we were going to help the parents and not help them. They were up front about their feelings and were struggling with a great deal of depression themselves. Thus, we have implemented continuing education workshops for them 3 or 4 times a year on that topic. We also link them to resources and give them ways to seek help in organizations that maintain confidentiality.

Hegland: Our teachers came from about seven centers and emerged as a support group for each other. They spoke about their feelings surrounding dealing with loss, the difficulties they had in helping children and families deal with deaths and drive-by shootings, and so forth. Then they began networking, not only with their communities as Suzanne said—we did require them to actually go out and find mental health resources in their communities—but also they continued call upon each other on an informal basis during and after the intervention.

Anything that one can do to create a support group for teachers is helpful. They do want to have access to psychologists or other mental health professionals to talk about their feelings. Many of them were investing their own funds to see mental health professionals. Head Start could certainly help in that regard.

Question: Could you talk more about the relationship between substance abuse and depressive symptoms?

Beeber: Clearly, the relationship is there. The idea of linking people to substance abuse programs as well as help for depression is crucial. What we are finding in our data so far is that women (since we are only studying women) do get access to help, but when they are prescribed SSRIs (selective serotonin reuptake inhibitors), they are not using them well. For one thing, they are extremely expensive so that mothers tell us they only use them once a month around their period. They tell us that they save them using one monthly prescription for the entire year. We have vast problems right now in trying to get adequate resources and support for them to use these medications. I have been aggressive in trying to reach out to providers and educate them from the standpoint of not just simply writing a prescription, but also ascertaining whether the woman has the resources to use or procure the medication that they are prescribing as well as providing ongoing follow-up.

Another problem is that a woman may get a script for an SSRI, but when she goes back for follow-up, she is not seen by the same person nor followed even in the same clinic. Unfortunately, this is the type of problem that comes with poverty. The inadequacies of these health care systems are becoming apparent from the standpoint of the use of antidepressants in this particular population.

Question: Are you using surveys to gauge the issue? What is the prevalence?

Koblinsky: We did not look at substance use or abuse in our study, but parents brought up the fact that when they were down they were more likely to abuse substances. We have submitted a proposal for a violence prevention intervention that also would look at substance use and abuse issues.

Question: How much depression is undiagnosed postnatal depression?

Beeber: Since I work now with Early Head Start, I can also raise a question of how much postnatal depression is undiagnosed prenatal depression. In our studies, we are tracking women from pregnancy forward to see if we can at least start to unravel some of those questions. A predictor of postnatal depression is an episode of prenatal depression or depression at some earlier point in the life.

The problem that we have in general with depression is predicting when an episode occurs, when it actually ends, and when it simply drops into subthreshold levels and continues on. Some of the larger primary care studies are producing data now on how depression works when it does not reach diagnostic levels and how it hovers or doubles up on top of another preexisting dysthymia. We are beginning to get those pictures together, but again, not in these populations because they are hard to hold onto.

Question: For data analysis, are you using a cutoff point—a dichotomous score—versus depression screeners or depression severity measures as continuous data?

Randolph: We do have some analyses where we use continuous data in regression analyses, for instance, but there are other scholars who are also looking at it in terms of tertiles. They will take cutoff points based on what the sample looks like and then they will do tertile measures. Others, in a study I am involved with—Patricia O'Campo at Johns Hopkins University and Margaret Caughy—will look at a much higher cutoff point because data from other studies suggest that—again, these are all African American families—the cutoff point of 16 may not be appropriate for that particular group. Thus, different studies use different cutoff points, as would be true also with respect to the child outcomes and other types of data in these kinds of studies.

I challenge people who are looking at any of these studies as well as other studies to look at how the variables are operationalized and not merely accept the published take-home measures of depression.

Question: In these studies, was the authoritarian parenting style viewed as negative? Do we need to raise a question about whether that might be an adaptive way of parenting in some cases?

Koblinsky: That is a good point. One of the things that I want to mention too is when one looks at the three measures we used, one can see there was a lot of warmth. Many of the mothers, depressed or not, still exhibited warmth with their children.

Looking at the authoritarian scale, even the depressed mothers were using it about half the time, and the permissive style was used even less. A number of those items though did deal with harsh discipline methods. While it is obviously important to have follow-through in violent neighborhoods because the consequences are much greater than in a nonviolent neighborhood, which kinds of sanctions make sense is one of the issues that we have tried to look at as we look at parenting.

However, there still is a high level of physical, sometimes corporal, punishment that is less than ideal and that even distresses the parents. We have heard parents say, "I hit my child, and I felt bad about it afterwards." They have mentioned that their involvement in Head Start has given them some alternatives, whether it be time out or talking with the children about misbehavior, and has resulted in some positive changes. Perhaps it is important to look at parenting in these violent contexts in a different light than in a safe, middle-class environment.

Randolph: This is a methodological point. These were typical Baumrind styles or practices. Using these measures, one gets all three styles. These are parents who are high on authoritative practices, somewhat mid-level on authoritarian practices, and low on permissive practices. There could be a parent who scores on all three styles. Probably other statistical analyses, such as doing cluster analyses or some kind of profile analyses that looks at the mother who is high authoritarian and low on the authoritative versus a mother who is high on authoritative and low on authoritarian or permissive, might be a more informative strategy, particularly with respect to interventions, so that we do not miss the fact that parents use all three of these styles.

After an hour of interviewing, parents are very honest with us, which is how we obtain the authoritarian data. Having the observational studies and the longer periods of observation would probably elicit even more information about the authoritarian style. Then there would also be time for debriefing mothers on why, when, and in what context.

African American mothers will say to us, "I had to snatch him off the street," or "I had to snatch the water gun out of his hand because I do not want people thinking it is a gun," but they do not mean to do that. At that moment in that time, they had to be restrictive and forceful to make their point.

Comment: One has to realize that the challenges of parenting in these neighborhoods are so much greater than in middle-class neighborhoods that these mothers are with their children all the time. We have mothers who never let their children out and walk their children home from Head Start. The children never go outside so they are constantly underfoot as they are often in cramped housing. When they get out on the street, parents are already teaching children not to look in the eyes of drug dealers or to get away immediately anytime they see fighting. It is a challenging parenting situation, which might make it more likely that parents would resort to authoritarian practices when their children are just bugging them too much.

Hegland: I would like to raise a methodological issue that goes along with what is being said. When I starting using the parenting dimensions inventory in Iowa, our sample was 95% White. I looked at the studies that had used that measure before. They were finding a lot of variance accounted for by the measure, but they were comparing middle-class, White families with low-income, African American families. Thus, they were confounding ethnicity and SES.

Last fall I had the chance to work at Frank Porter Graham and to look at their sample, which was 95% African American. Our sample was 95% White. Both had low-incomes. We saw some interesting patterns. First, I would urge anyone who wants to look at the parenting dimensions inventory to look closely at the psychometric properties because it is difficult to use and has not worked well with different ethnic groups. However, we found that both groups "ceilinged out" on nurturance. All the parents reported that they hugged their children all the time. That may be social desirability, or it may be what is actually happening.

We did find differences, though, and this was comparing Chapel Hill, which is a community more similar to the one we were studying in Iowa. It was not like the high-crime neighborhoods that have been mentioned. We found that African American parents who had children with better social and academic outcomes were higher on consistency, whereas the White families from Iowa who had children with more successful academic outcomes were higher on responsiveness. That may be a cultural difference. Not that one is good and one is bad, but there are different belief patterns in those cultures. Thus, we need to look carefully at the cultural context as well as the environmental context in using these instruments.

Beeber: When women are depressed and stand back and look at their parenting, they will often talk about a completely different dimension than authoritative or authoritarian. They will talk about the fact that they are not truly disciplining or responding to their child. They will talk about the fact that they are reacting too often out of this irritability or fatigue that they feel continuously. They are not even in the same kind of dimensions that we are talking about with these instruments. This may be a beginning for some different ways of looking at parenting interactions than the standard ways that we have gone about it. We may need some creativity there.

Comment: From a clinical point of view, thyroid levels should be checked. Additionally, one should look at the relationship between that and the symptomatology of depression, particularly prenatally, and the impact on the unborn child.

Question: What were the findings regarding internalizing, externalizing, and the gender differences? Was there an overlap?

Randolph: A child could have high or low levels of either. He or she could have high externalizing and high internalizing or could be high on one and low on another. Those kinds of additional analyses would be more instructive for us. The same is true for us with respect to the behavior problems and social skills. We want to know whether the behavior problem children are the children who have high or low social skills and how can we build on their strengths.

Mental Health Issues in Diverse Populations

CHAIR/DISCUSSANT: Lonnie Sherrod
PRESENTERS: Amy B. Lewin, Maureen O. Marcenko, Fredi Rector, Susan Dickstein

■ Examining the Relationship Between Child Behavior and Maternal Mental Health in Immigrant Families

Amy Lewin, Edgardo Menvielle, Michelle New, Cheng Shao, Jill Joseph

The relationship between maternal psychological distress and behavior problems in young children is well documented (e.g., Billings & Moos, 1983; Gross, Conrad, Fogg, Willis, & Garvey, 1995). However, this body of research largely excludes children of non-English speaking parents, thereby under-representing immigrant children. Little is specifically known about the prevalence or correlates of behavioral difficulties in young children from immigrant families, despite their growing proportion in the population (James, 1997). This study examines the prevalence and correlates of child behavioral concerns in two distinct groups of immigrant families with Head Start children. These two groups are from Latin American and African countries of origin and represent very divergent cultures and migration histories. The sample consists of 290 Head Start children enrolled in the Starting Early Starting Smart program based in Montgomery County, Maryland.

Of the enrolled Head Start families, 43% were Latino immigrants, 22% were non-Latino (African, Caribbean, and Asian) immigrants, and 35% were nonimmigrants, primarily African American. Most caregivers had at least a high school degree (69%) and were employed (62%). The mean age of the children was 4.3 years (*SD*=3.9 months), and 52% were male.

Child behavior was assessed with the internalizing, externalizing, and total problem behavior scales of the Preschool Kindergarten Behavior Scales (PKBS; Merrell, 1994), which were completed separately by the primary caregiver and the teacher. Problem behavior was indicated on each scale by a score above a predetermined cutoff as reported by the caregiver and/or the teacher. The caregiver's psychological distress was indicated by a score above a predetermined clinical cutoff on the anxiety and/or depression subscale of the Brief Symptom Inventory (BSI; Derogatis, 1993).

The prevalence of problem behavior in this sample ranged from 25-27%. There were no significant differences between the Latino immigrant, the non-Latino immigrant, and the nonimmigrant groups. However, the factors associated with child behavior problems for the nonimmigrant group were different than those for both of the immigrant groups. With one exception, there were no differences between the two immigrant groups in associated factors. Analyses presented here will focus on the children from immigrant families. In bivariate analyses, caregiver anxiety and depression and a high score on the parent-child dysfunctional interaction subscale of the Parent Stress Index (Abidin, 1990) were each significantly related to child externalizing, internalizing, and total problem behavior for both immigrant groups. The child's gender, household income, the caregiver's use of mental health services, and the degree of violence between adults in the household were not significantly related to child behavior problems in either immigrant group. For the Latino immigrants only, the presence of only one biological parent in the home was significantly associated with externalizing and internalizing problems.

In a multiple regression analysis, the presence of only one biological parent in the home, caregiver anxiety, and difficult parent-child interactions were significant, independent predictors of child externalizing, internalizing, and total problem behavior for both immigrant groups.

These findings support the relationship between caregiver factors and child behavior in two different groups of immigrant families.

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■ Teen Mothers and Their Caregivers: A Comparative Study of Needs, Challenges, and Strengths

Maureen O. Marcenko, Joanie McCollum, Fredi Rector

This paper presents the initial results of a home-visiting model for Early Head Start teen parents (n=70) and their children who are living with an adult caregiver (n=62) in a low-income, urban community in North Philadelphia. The characteristics of these families at the time of intake and the results of interviews with teen parents and their adult caregivers in their homes are reported here.

The mean age of these African American teen mothers was just under 18 years (17.62). Most (54) of the teen mothers had already given birth to their babies. The median family income was between $6,001 and $9,000. Both groups were asked about services or assistance that they might need. The top priority for teen parents was a job for themselves or their baby's father (86%) and for their adult caregiver it was money to pay bills (66%).

Sixty percent of the adult caregivers were receiving public assistance cash benefits. Approximately 49% (30) of the adult caregivers were employed at least part-time, and most were single (82% or 51). These families had limited capacity to improve their financial situation. Less than 50% of the adult caregivers had graduated from high school. The average highest grade completed was 10.34 for the adult caregivers, and 9.97 for the teen mothers, of whom most (76%) were currently enrolled in school.

Temporary Assistance to Needy Families (TANF) limits teen parents' access to public assistance for financial support (ACF, 1996). Therefore, participants were asked about their level of knowledge and concern regarding TANF regulations. Of the caregivers, 13% did not believe they were informed about TANF, but were not concerned about it. 11% of the teen parents were not informed about TANF or concerned about changes in TANF regulations. Only 25% of the teens believed they were well informed about TANF.

The Adult-Adolescent Parenting Inventory (AAPI; Bavolek, 1984) was administered at intake. This 32-item survey measures the degree of agreement parents have with maladaptive parenting behaviors. The items are clustered into four constructs: (a) inappropriate expectations, (b) empathy, (c) corporal punishment, and (d) role reversal. Parents are classified as having potentially problematic parenting behaviors, average parenting behaviors, or positive and nurturing parenting beliefs and behaviors in each of the four constructs. In all four areas, the teen parents exhibited average or above average parenting attitudes and knowledge. The adult caregivers exhibited problematic parenting attitudes and knowledge in three of the four areas. Their attitudes and knowledge about corporal punishment were average. Apparently, the teen parents are accessing parenting education in school.

The coping ability of the teen parents and their adult caregivers was measured with the Family Crisis Oriented Personal Evaluation Scales (F-COPES; McCubbin, Larsen, & Olson, 1991), and the results were very encouraging. Both the teen parents and their caregivers demonstrated the ability to cope effectively in stressful situations. Self-esteem of the teen mothers was measured using the Hare Self-Esteem Scale (HSES), which indicated that the teen parents in this sample had low self-esteem.

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■ Mental Health Promotion in Early Head Start: Lessons from Research on Postpartum Depression

Susan Dickstein, Ronald Seifer, Karin Dodge Magee, Maria Eguia, Regina Kuersten-Hogan

Early Head Start serves low-income pregnant women and families with infants and toddlers to enhance children's development, foster parenting competence and quality of family relationships, facilitate parents' economic independence, and support coordination of community resources. EHS targets families at risk for nonoptimal child outcomes based on multiple contextual risks, particularly poverty.

One well documented risk associated with poverty is parental depression (Planos, Zayas, & Busch-Rossnagel, 1997; Sameroff, Seifer, & Bartko, 1997). Understanding the effects of maternal depression, especially during the child's 1st year, is especially relevant for EHS, which serves families during the transition to parenthood, a developmentally challenging time even in the best of circumstances. Generally, maternal depression has been associated with disruptions in maternal behavior, mother-child interaction, child developmental outcomes, and family functioning (Dickstein et al., 1998; Seifer & Dickstein, 2000).

The Family Relationships Study, an NIMH-funded investigation, focuses on maternal depression during the transition to parenthood and differentiates lifetime history of depression from depression during the postpartum period (PPD). One hundred and twenty-two families were recruited from prenatal childbirth classes. Due to other study goals, families consisted of two adult partners, who were primarily White, middle class, and well educated. Thus, the impact of depression was studied without confounding the risk of poverty.

Couples were recruited during pregnancy and followed at 4 and 14 months postpartum. Diagnostic assessments (SCID; First, Spitzer, Gibbon, & Williams, 1996) were conducted at all assessment times. Groups were formed based on timing of depressive episodes. The No Illness control group (56%) had no history of major depression; the PPD group (15%) experienced major depression during the 1st year postpartum; the Other Major Depression group (29%) experienced major depression at a time other than postpartum. Family functioning was assessed with the McMaster Structured Interview of Family Functioning (Epstein, Baldwin, & Bishop, 1982). Infant social-emotional competence was measured with the PIRS (Seifer et al., 1996).

The significant research findings were the following:

1. Lifetime history of depression was an impressive risk for PPD (odds ratio=12.24).
2. PPD (in particular) was associated with infant incompetence (*F*=4.90).
3. PPD (in particular) was associated with unhealthy family functioning (*F*=5.68).
4. Unhealthy family functioning was also associated with infant incompetence (*r*=.36) and continued to be related even after controlling for variance associated with PPD (*r*=.30).

The implications for EHS are the following:

1. The rate of PPD in EHS mothers is likely greater than the 15% suggested by our data given the multiple contextual risks often associated with poverty. We need to be sensitive to the presence and consequences of PPD in these families.
2. In developing preventive intervention programs, mothers at risk for PPD can be identified early by assessing lifetime history of depression during pregnancy (our results suggest a 12-fold increased risk). Programs can target a reduction in the intensity of depressive symptomatology, even prior to the onset of full-blown disorder.
3. Goals for EHS enrolled families should include facilitation of parenting competence and enhancement of parent-child relationship quality, risks known to be associated with depression. Prevention/intervention efforts to promote healthy early childhood development, especially in the context of maternal depression, should also include a solid family component.

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"Expert" Advice on Growing Up Healthy: Creating Parent Guides to Child Development

CHAIR: John Pascoe
PRESENTERS: Sharon Ramey, Edward Schor

Edward Schor: The American Academy of Pediatrics (AAP) has developed a three-book series for parents—*Caring for Your Baby and Young Child: Birth to Age 5, Caring for Your School-Age Child: Ages 5 to 12*, and *Caring for Your Adolescent: Ages 12 to 21*. The AAP is a large organization active in Washington, D.C. as lobbyists for children's issues. Therefore, the books have to be edited in a fashion that is attentive to the political climate. The content is, in effect, the policy of a major organization, all of whose members may not agree with those policies. All three volumes have different editors, with contributions by a variety of people. I am the editor of the book for parents of children in middle childhood. Each of the three editors has taken a different route in developing the books, but the AAP has tried to develop a similar look to them. They are published by Bantam Books and available in bookstores.

Each book is extensively reviewed. There are between 60 and 70 technical reviewers who review and update the volumes. At times, we want to ensure that we are scientifically correct. We also argue over certain issues. For example, the people who are interested in injury prevention do not want to use the word "accident," but I do because that is what parents understand.

The AAP published the early childhood book first, which did well. Next, they published the adolescent book. After several years, they realized they needed a book addressing the middle years, although it was not considered particularly important. Psychoanalysis has given us the notion of a latency period—that there is nothing happening between age 5 and the onset of puberty. I was asked to edit it and was excited because when I went to the bookstore and looked for books on ages 5 to 12, there was nothing available except books addressing disorders. There were books on ADHD, bed-wetting, and disciplinary issues, but none addressed general parenting advice. Even Dr. Spock only had a small part in the back of his book on the middle years. I realized this was an opportunity to address what is happening in these years.

However, while all parents buy books on early childhood, usually only parents who are having some sort of trouble with their children buy books about older children. It was apparent that we were writing this book for a unique segment of parents and teachers. I saw teachers as a particular audience for this book because they are hungry for information on children's health and development.

The parents who would be interested in buying this book were not a random sample of the population. They were parents who already were thinking that development was occurring in these years. They were likely to be literate and would use a book as a reference. The book was shaped knowing that we were targeting the middle class. One of the early reviews criticized that the book was too middle class, but it was purposely intended that way.

John Pascoe: Could you please expand on the process of using multiple authors? How was the expertise of a number of individuals incorporated?

Schor: I spent the day in the corner of a bookstore that had child development and parenting books. I went through all the tables of contents and dictated notes to myself about potential topics that a book ought to cover. Previously, in my mind, I had scouted out major divisions and subjects to cover. Then, I outlined the book, and the subjects broke into sections nicely. Next, I thought of pediatricians who were AAP members with the necessary expertise and whom I could depend on to help write. I chose people with whom I had a relationship, but also whom I thought were expert in their field.

We used an interesting process that greatly facilitated the writing. I prepared the outline and then a sentence outline of the book and gave each person their section. Contributors were welcome to expand and modify their section after discussion. The Academy provided a writer, which was helpful. Contributors had several options. First, they could write it all. There were six or eight associate editors who wrote their sections, chapter by chapter, themselves. Second, contributors could prepare a draft and give it to the writer who would rewrite each chapter so that the book was in one voice. Third, authors could pull together articles and lecture notes and send them to the writer, and he would try to construct a draft of a chapter. Finally, the writer was willing to interview contributors on individual chapters and then go back and forth iteratively with them to make sure it was correct.

As editor, I went through the entire book, line by line, to ensure that information was correct and that we were using the same style. I also paid attention to the politics of the book in the sense that we were developing policy. The process to get the book to the publisher was 2 years. A printed copy was completed about 15 or 18 months later. There were some legal problems that also delayed the final printing.

We are supposed to revise the book every 4 years. For the second edition, I went through the book again, word by word, to identify information that needed to be updated. Some I updated myself, while others I sent back to the associate editors. We also wrote a few new chapters to address issues not included the first time.

The book is largely for reference. It is not one to be read cover to cover, although there are chapters designed for parents to read, such as the fundamentals of child development and behavior during this age. There are also chapters on individual issues. As times change, new issues will arise that will need to be added. The revision went back to the Academy of Pediatrics and over 60 people reviewed individual sections. I negotiated with reviewers on the use of specific terminology, such as "accident" or "injury."

This book is the best advice we could write on raising children in this age group. However, there is not a lot of research on some of the issues. We drew upon experience, research, and theories and extrapolated from all of them to different circumstances.

It is difficult to write a book that answers the questions of individual parents. It is difficult to be in front of an audience of parents speaking about child development and answer specific questions when there is a lot behind the questions that cannot be addressed without having experience as their child's clinician. The same difficulty arises in writing a parent advice book. The material has to be general enough to provide solid information, but not so specific that it is minutiae for most people and wrong for others.

There are many parent advice books on the market that do not take a similar cautious approach. I have great concern with those books. My book has been criticized at times for being too general. It is a delicate line to walk.

Sharon Ramey: My coauthor, Craig Ramey, and I published two books in 1999, Right from Birth: Building Your Child's Foundation for Life and Going to School: A Complete Handbook for Parents of Children Ages 3-8. For the first book, we were approached by a publisher who asked us to summarize the research on early infant development, particularly in light of the new research on brain development during this time period. The field of infant behavioral research was developed in the mid-1960s, and what we know 35 years later is phenomenal. However, most of it has not been shared with parents.

In the last few years, there has been much attention in the popular media around early brain development, which coincides with the fact that there are many parents who are older and better educated and more planful about being parents. They are eager to look for expert advice. Parents want to go to the experts and glean all they can from them. This is different from previous generations.

We wanted to share the new research, but we are used to writing scientific articles. I did not know how to take the scientific knowledge from researchers, such as Kuhl, around vocalizations and brain development and make sure parents could understand and use it. However, parents do not need much of what we know about infants because it just happens. It is interesting though, even if it does not necessarily change the way one parents. At times, giving advice seems a little presumptuous. On the other hand, we have a large knowledge base and need to share it with other people.

The publisher offered a professional writer, which we tried. The process was for us to pull together the material and dictate it, and then the writer would tie it together. However, material got distorted and important points were left out. It was easier for us to write it, although we did receive help with the editing.

The second book we wrote, *Going to School*, covers the ages of 3 to 8. It deals with how parents can work with schools and how drastically different schools are today than they were even a generation ago in terms of what they expect of parents. The book coincided with a congressional study we conducted about the Head Start Transition Project. Neither of the books read like research reports, but a great deal of what we learned from that research project, as well as the literature we recently reviewed, was used in preparing it. Unfortunately, since they are in the $20-$30 price range, not many Head Start parents are going to buy these books.

Educational TV in Mississippi collaborated with a number of other states to produce a 12-part series based on and named after our first book, *Right From Birth*. They received foundation money to develop this series. It will air this fall for the general population. They also have separate manuals, worksheets, and teaching sessions for parents who are teenagers, who are more isolated, or who need extra help to do the best they can with their children. Additionally, other people have developed parent-training sessions building on the materials in our book. Our publisher was wonderful about granting permission for anyone to use the materials for any purposes.

Writing the books turned out to be rewarding, and also improved our scientific writing. Now when we write scientific articles, we write more clearly and with less jargon.

Pascoe: How long did the writing take?

Ramey: We wrote both books in a year. However, we did not go through the grueling and important next step of having people edit and review. We originally wanted to reference all of our statements, but the publisher did not let us, which saved an extra year's worth of work.

Question: Do you have any suggestions for materials for parents at a lower reading level, especially for the Spanish-speaking community?

Pascoe: An agency of the federal government, the National Highway and Traffic Administration, publishes vehicular safety pamphlets, which address the proper use of seat belts and car seats. In addition to the Spanish translation of English pamphlets, they have recently hired someone to generate pamphlets that are solely in Spanish from the start.

Ramey: We recently reviewed numerous parenting curricula that are being used in Early Head Start programs. While I like the philosophy behind them, my opinion is that they are thin in terms of content. They discuss being responsive, reading to your baby, and motivation to be a good parent. They have many good tips but are spotty and do not cover all the things that parents need to know fast enough to help a baby. By the time parents would make it through the curricula I have seen, their baby already would have passed through everything that they learn from attending a weekly or monthly parenting session. Most of our parenting programs have never proven to be effective.

We can educate parents, and parents do want to learn. However, the way we deliver parent education is watered down. Maybe we think it would be too much for parents to be told what they really need to do and know. People are gentle to a fault in their parenting curricula.

From my experience in North Carolina and Alabama, parents enjoy the programs and believe they are learning valuable information. They take home ideas and try them with their children. However, it is just not enough, is not provided fast enough, and does not cover all the important areas of development.

I do not know that parent education benefits the children. Perhaps over the years by the time they have their second or third child, parents become more knowledgeable. However, with at-risk mothers, neither the programs nor the books that are available are enough.

Schor: Similarly, I am not aware of any books, but the issue is how people who are not as well educated get information. There are many brochures that different organizations publish, but they contain specific advice for specific circumstances. If one is able to anticipate those circumstances or events, that targeted advice can be helpful. For example, on the 1st day of kindergarten, there are some issues parents ought to think about, and writers can develop a list to help parents.

However, you said something important that has little to do with our books and more to do with how to educate parents. We are uncomfortable criticizing people's parenting skills. We are uncomfortable saying there are right ways and wrong ways or better ways and worse ways to approach rearing children. Circumstances are different today, and there is a greater need for parent education and mentoring. Nonetheless, our way of helping parents has not caught up with the need. I struggle with this all the time. I am sure all of us have been in the proverbial grocery store and seen an interaction between a parent and a child that was the wrong way to handle the situation. There are better ways to do it. While I have been tempted to intervene, I never have.

Even in our practices, we are overly cautious about giving advice. We should scope out the family's boundaries and values and so on. We need to work toward a cultural change about the legitimacy of teaching parenting skills and supporting good parenting skills. Books are not the answer. They may be a piece of it, but they are a small piece of it.

Comment: We have just started our Head Start program and provide parenting education classes not through lecture, but by demonstrating good practice. I think we will see a difference in the way children are disciplined.

Schor: There has been a dilemma in Head Start and the early childhood field for a long time: How does one convey information without insulting parents? I do not have a good answer to this. In my book and in other circumstances, I try not so much to give answers as to give parents the information to be able to analyze the situation, so that they will be able to draw the right conclusions. That is a strategy I use when I am teaching, whether it is a group or individual. What is going on here? What do we know about the circumstance, and what do we know about the child's development at that point and how they might be interpreting the circumstance?

When we are stressed, we go back to our brainstem. A parent's way of dealing with a child who is acting out, unless she or he can take a deep breath, sit back and be thoughtful, will be to respond in the way one experienced discipline as a child. Parenting education and child care provider education has to focus on this introspective aspect of being a parent or being a child care provider.

Ramey: One method of disseminating information is through an undergraduate-level course. We used our two books as textbooks. The informal title of the course was, "The Science and Art of Parenting." We had many diverse students: women and men, African Americans and Whites, and parents and people who were not parents. Students participated in debates and presentations on issues, such as the pros and cons of breastfeeding and spanking. The class was evenly divided about spanking, and those who endorsed spanking vigorously supported it. Another issue was whether women should be in the workforce when they have young children.

Another opportunity for me to communicate the contents of our book was through publicity that our publisher wanted us to do. We had a chance to be on many radio programs, including call-in talk shows and NPR radio shows. We also did several television programs. Our publisher hired a company in New York to coach us about how to behave and what to say and not to say. Much of the advice was not intuitive at all.

The point about not being judgmental is important. People need to be excited and to feel good about their parenting. However, the book will not serve its purpose if it is only going to make parents feel good and let them think they do not have anything to learn. It is a delicate balance.

Not all cultures have that hands-off approach about parenting. I adopted my first two children from another culture. In Korea, we saw many people give commands or directions to children who were not theirs and even correct parents in public. If they were on a bus and did not like what a parent was doing, people on the bus would speak up and tell the mother or father to stop. I had never seen that. There was not any fear that the parent was going to get angry.

We still treat children like they are property belonging to parents, rather than the future of our country. We all have a vested interest in children's well-being. We worry about offending a parent versus giving a child the best start possible. Again, I do not have the solution for this dilemma. We have been a family rights country, perhaps to a fault. Children are suffering because no one wants to interfere, or else we do not know how to help.

Comment: I want to comment on what was just said. It reminds me of the Spanish-speaking parents that I work with when they realize that the way they were raised and the way they parent is not the best way. They suffered being raised with physical punishment, and they know in this country it is not acceptable. However, their hands are tied because they do not have other strategies.

Schor: I have talked to many politicians who want to help children. Many people endorse teaching parenting in high school or in prenatal classes. I have never had a baby myself, but I have had patients and a wife who have. At that point, people cannot think past labor. Professionals can talk about childrearing, but until the child is there, it is not a reality.

We can teach some introspection and think about how people ought to relate to one another and some basic values. However, it is tricky because we cannot teach parenting almost until it happens, and then we have to race to do it. Part of the education is making sure parents have the experiences and ways of thinking of relationships. Our books focus on relationships and communication.

Ramey: There is a recent example where professionals have tried to communicate a technique, putting infants to sleep on their backs, which could cut the incident of Sudden Infant Death Syndrome (SIDS) by about 50%. In fact, that success has already been attained in several other countries that adopted back sleeping as a practice. In the U.S., we have had about two generations of mothers with infants being told to put their infants to sleep on their stomachs. The National Institute of Child Health and Human Development (NICHD) led a "back-to-sleep" campaign with posters and information, targeting practitioners, child care providers, Head Start programs, and parents. NICHD also wanted to determine the extent to which the advice was being followed. They have completed some follow-up studies and published the results a little more than a year ago. One finding is that many people are not following the advice, particularly African American families and families in the South. They are not putting their infants on their backs to sleep. The study went further and asked why not? It involves how people trust informants. Some of us trust research, and others are suspicious of research. Some people believe professionals are going to change their mind and, thus, ignore what scientists and professionals say. The very things that catch our attention and make us want to do adopt certain practices are the things that turn other people off because of their experience with information from those sources.

A new field of study in behavioral research is how people get information, how they decide what is good in the information they receive, and how they decide to act upon it. Broadly, this area of information gathering and decision making is relevant to how we can help parents acquire the skills they want.

We rarely encounter parents who do not want to parent better. It is only a question of how to get the information in a way they can use. People on the front lines working with Head Start and other programs might have insights. I have worked for many years with someone who also studies Head Start families, Dr. Betty Keltner, dean of Georgetown University School of Nursing. She is Native American, and we recently worked with eight different Native American tribes. To disseminate information, we had to work with a combination of people in the tribe—a council of elders. People inside have to sanction the information one wants to share. Thus, rather than outsiders coming in and proselytizing, insiders carry the message in ways that have credibility.

Years ago, I worked in Alaska when they introduced birth control pills. Naively, people from the lower 48 states came up with birth control pills and began distributing them. We had this notion that we were each in charge of our bodies and that a woman could decide whether to take a form of birth control, for example, if she did not want to have a baby at that period in her life. When the birth control pills were introduced, mainly through obstetricians or visiting nurses, there was a huge increase in emergency room admissions of women who were being badly beaten. It took about a year and a half to discover it was because of the introduction of birth control pills. No one wanted women to get beaten. No one even thought it would happen. However, when the men found out women were taking it, they were outraged because they had not been consulted. It was not just the men, but rather the whole community was outraged. We learned, sadly and belatedly, that this was not the way to do it and that our notion that everybody is in charge of her or his body is not a universal, cross-cultural concept.

Back to whether parents or society are in charge of children, we need to take culture into account. Again, returning to the "back-to-sleep" campaign, the stakes are not whether your child has a somewhat higher I.Q.; the consequence is life and death.

Question: I am an occupational therapist and am consulting with Head Start programs on how to observe and identify early sensory processing problems. Is there ever any need to put out key indicators of problems for parents so that at that point they could go and seek a professional evaluation?

Schor: You touch on a broader question of what and how much parents should know and what we should expect of parents. We have not been successful at almost any efforts we have had to turn parents into developmental screeners. I am pessimistic and do not strongly advocate for doing more.

Ramey: The AAP published new Attention Deficit Disorder (ADD) guidelines, which received a high level of attention this past May.

Schor: Yes, recently, the Academy came out with ADD materials, explaining the characteristics of children with ADD. We have to determine the level of detail that is important and what can be expected of parents. We hope that there are observant parents who sense when something is amiss and that they have a place to ask questions, which is, frankly, a bigger problem.

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We hand out brochures on different ages and recommend looking for certain milestones. I am more inclined to help parents have some general notions of how children should develop and encourage them to make some comparisons.

Pascoe: I would like to introduce the concept of time into this discussion because in the area of child development the idea of monitoring or surveillance over time is important. On a given day, it may be difficult to make the decision of whether this child, for example, is delayed or not. However, if a professional and the family are following a child over time eventually, and hopefully sooner rather than later, if an intervention is needed it will become obvious both to the professional and the parent that something needs to be done.

Question: Parents often receive conflicting reports from pediatricians and specialists and do not have the next level of information to try and reconcile the various pieces of information they receive. Are there any systematic efforts to provide more detailed information for parents?

Ramey: There are places doing a good job in this area. Minnesota has some universal parenting information available through the public schools and for all parents with newborns. Almost all of their public libraries as well as their elementary schools have numerous books and information for parents that a statewide group of professionals helps put together and constantly updates. They try to reach out to all parents with infants.

Other methods of dissemination to parents are information hotlines and library sections put together by leading national groups of professionals across different disciplines that would be considered the finest and most up-to-date collection for parents. The amount of time it takes for professionals to compile such a collection and make it available would be well invested. Then parents would know this is the best of what the professionals in the State of Minnesota think they should be reading. If there are parent information hotlines, we could get to a place where we offer support.

Question: In the early childhood field, we have position statements concerning best practices for children. In the world of parent education, there is not always a consensus about best practices, and there are people giving mixed messages to parents. Do you have thoughts about these divergent recommendations parents receive?

Schor: This relates to what we said before, that there is great danger in giving specific answers when there is not a one-on-one relationship with a parent. In addition, much of the advice is value-laden. For example, the issue of stay-at-home mothers versus working mothers hangs over every discussion of parenting advice. It is difficult to find a nonvalue-laden response to some issues.

Again, I have difficulty with people who have a "one shoe fits every foot" answer because that is not how children are and that is not how parents are. However, it also speaks to the insecurity of parents and their hunger for guidance.

To accept what is apparently a flippant response says something about the receiver of that message. It should also tell us, as professionals, that we have a major job to do in helping parents feel more secure and better prepared to try to problem solve on their own, as opposed to turning to someone else for an answer.

Ramey: There are parents who want specific advice as opposed to being offered several different approaches from which to choose. It is harder for parents to have to find out what works for them and their children. Unfortunately, the books that sell the best are the ones that take extreme positions. Any extreme position gets publicity, and publicity sells books. For example, Harris wrote a book that claims child outcomes are almost all due to genetics and peer influence, and it sells millions of copies. While her book accurately reports some of the research, it distorts other evidence and leaves out many findings. It is not a horrible book; she is a gifted writer and thoughtful person. However, the research findings are exaggerated.

There was another book published last year that says the first 3 years of life are not important, as a reaction to people thinking everything happens in the first 3 years. There is increased awareness that the early years do matter, especially for brain development. A child's ability to understand language and to process certain information is impacted by stimulation received in the early years.

It is the extreme positions that take responsibility away from parents, such as books that advise parents to be consistent and not deviate. A parent could follow that advice. However, dealing with and thinking about every situation is harder than having rigid rules, no matter what.

Schor: Let me emphasize that last point. When I give parenting talks I usually say something to the effect that if being a parent is not the toughest job you have ever had, you are doing it wrong. When someone gives an easy answer, my hunch is it is probably wrong. There is no shortcut to being a good parent.

We have set up social circumstances for families so that they do not have the experience, education, time, or social support for thoughtful childrearing. There are pressures on parents to find the quick right answer. We have to convey that there is no quick right answer. If one is going to be a parent, it is going to be tough and is going to take time.

Pascoe: I have a question for the future. More parents, especially the middle-class parents that are buying these books, are accessing the Internet. Are there any plans, at the Academy or in other places, to put materials for parents online?

Schor: I am not sure if the Academy has any plans for disseminating advice on the Internet. Many people are setting up websites with parenting advice, but it is hard to know which ones are good. Also, when parents are in the throes of a problem with their child, they are not likely to stop and go to the Internet for a solution; nor will parents open a book at that point either. Thus, while people are developing numerous parenting sites—some of them good, I am not sure who will use it and when. Nevertheless, in the future, the way we get information and process it is going to be somewhat different because of computerization.

Parents and Social Institutions

Starting Early, Starting Smart: A Comparison of Head Start Families' Transitions from Behavioral Health Services Need to Services Use

CHAIR: Eileen Liscik O'Brien
DISCUSSANT: Jane E. Knitzer
PRESENTERS: Eileen Liscik O'Brien, Belinda E. Sims, Philip J. Leaf, Jocelyn Turner-Musa, Amy B. Lewin, Carol Amundson Lee, Leanne Whiteside-Mansell

Head Start programs focus on facilitating child development through promotion of family strengths and effective intervention to address family needs. Identification and appropriate referral of children with need for behavioral health services is an important priority for Head Start programs. Available research evidence in school-age populations suggests that there is an imperfect correlation between need for services and service utilization (Costello & Haniszewski, 1990; Burns et al., 1995) and that a variety of individual and family factors may explain this apparent discrepancy (Koot & Verhulst, 1992; Cohen & Hasselbart, 1993; Pavuluri, Luk, & McGee, 1996; Goodman et al., 1997). In spite of growing evidence supporting the long-term benefits of early childhood preventive intervention, particularly those targeted to families through programs of home visitation (Olds et al., 1997), much less is known about these issues in the vulnerable preschool-age population served by Head Start. The purposes of the studies being presented were to: (a) estimate the prevalence of need for behavioral health services, (b) identify the proportion of those with such need who receive services, and (c) model the relationship between service need and use using a variety of mediating variables in three diverse populations of Head Start children and their families.

In addition to the extent of apparent need for services in the Head Start child, we hypothesized that features of the caregiver, the caregiver-child interaction, and the social environment would mediate the relationship between service need and use. These relationships are examined in three diverse contexts: an urban population of African American families, a suburban population with a large number of immigrant (predominantly Latino) families, and a rural population of White and African American families. All are participants in a longitudinal multisite study of service integration funded by the Substance Abuse and Mental Health Services Administration (SAMHSA) and the Casey Family Program. Data presented were obtained during baseline data collection at each of three sites. Differences between sites in terms of methodology, demographics, and findings as well as conclusions common across sites are discussed.

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■ Exploring the Relation Between Service Need and Service Utilization Within an Urban Head Start Setting

Belinda E. Sims, Jocelyn Turner-Musa, Philip J. Leaf

Identifying needs and providing services to children and families to promote healthy social and emotional development of the child is a primary goal within Head Start. Thus, the Head Start setting provides a good opportunity to better understand service needs and service utilization among preschoolers. The study examined: (a) Head Start children's need for services, (b) their receipt of services, (c) the relationship between service need and service use, and (d) caregiver and parenting factors that relate to service need and service utilization.

The Baltimore Starting Early Starting Smart (BSESS) study focuses on the integration of services into the early childhood setting. The present study assessed service need and utilization at two Head Start centers serving children 3-5 years of age, and two comparison Head Start centers. Five hundred and forty-five families (two cohorts) in the BSESS project provided data for the study. All of the families had a child enrolled in a Head Start program at the start of the school year. Caregivers participated in 2-hour, in-home interviews before the start of the SESS intervention services. The study focused only on African American families (97% of sample, *n*=522) with complete data (*n*=409). Slightly more girls than boys enrolled in the study (52% compared to 48%) with a majority of 3- and 4-year-old children (48% and 44% respectively).

Service need was measured through caregivers' and teachers' ratings of the child's behavior on the Preschool and Kindergarten Behavior Scale (PKBS; Merrell, 1994). The PKBS is a standardized behavior assessment developed to assess children aged 3-6 years. The PKBS is divided into two domains: social skills and problem behaviors. Children with scores from either parents or teachers that placed them into moderate to severe functional levels, on either the social skills or problems behavior scales, comprised the need group. Children with scores in the high to average functional levels comprised the comparison group.

Use of services was assessed with the Service Access Utilization and Satisfaction (SAUS) questionnaire that was developed for SESS. Caregivers provided information about behavioral health services (physical health, developmental, behavioral, and emotional) their child received during the past 3 months and 12 months. In addition, caregivers provided information on their own use of physical health, mental health, substance abuse, and parenting services. Perceived need for services was also assessed through the SAUS. Caregivers were asked whether, in the past year, they needed any of the above services but were unable to get them.

Other caregiver variables were examined for their relation to service need and service use

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(possible mediating or moderating effects), specifically, caregiver demographics (e.g., age, education, welfare status, work status), psychological well-being (Brief Symptom Inventory; Derogatis, 1993), parental stress within the parent-child relationship (Parenting Stress Index-Short form; Abidin, 1995), and interpersonal conflict (Conflict Tactics Scale; Straus, 1997).

Forty-one percent of the children (167) were rated in the moderate to severe functional levels on the PKBS and, thus, comprised the service need group. Results from preliminary analyses show that children in the service need group were more likely to be boys and more likely to be from families receiving welfare. Caregivers of children in the service need group reported more psychological symptoms, more parenting stress, and more interpersonal conflict than caregivers of children in the comparison group. Also, trends were found for need status related to service utilization, with caregivers of children in the service need group reporting slightly more use of child and caregiver physical health services than caregivers of children in the comparison group.

These preliminary findings support the need for early identification of behavioral health issues and for child and family programs to address multiple problems within families. Providing the SESS program within Head Start is a step toward reducing the gaps between service need and service utilization.

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Exploring the Relationship Between Behavioral Health Service Need and Service Use Within a Suburban Head Start Setting

Amy B. Lewin, Michelle New, Cheng Shao, Edgardo Menvielle, Brian Razzino, Jill G. Joseph

This analysis explored the gap between the need for behavioral health services and actual service use by 290 Head Start children and their primary caregivers. All families were enrolled in the Starting Early Starting Smart (SESS) project based in Montgomery County, Maryland. The prevalence of need and unmet need for developmental and/or behavioral health services in this sample were examined as well as the extent to which family characteristics explain variability in use of services.

Of the enrolled Head Start families, 43% were Latino immigrants, 22% were non-Latino (African, Caribbean, and Asian) immigrants, and 35% were nonimmigrants, primarily African American. Most caregivers had at least a high school degree (69%) and were employed (62%). The mean age of the children was 4.3 years (*SD*=3.9 months) and 52% were male.

The child's need for behavioral and/or developmental services was assessed with the problem behavior scale of the Preschool Kindergarten Behavior Scales (PKBS; Merrell, 1994), which was completed separately by the caregiver and the teacher. Children were considered in need of services if the score from the caregiver and/or the teacher fell above a predetermined cutoff score indicating moderate or severe problem behavior. The caregiver's need for behavioral health services was indicated by a score above a predetermined clinical cutoff on the anxiety and/or depression subscale of the Brief Symptom Inventory (BSI; Derogatis, 1993). An additional variable was constructed to indicate level of need within a family based on multiple indicators of distress.

Eighty-seven children (30%) had some need for behavioral health services as indicated by scores on the caregiver and/or teacher PKBS. Of these, only 23 (26% of the need group) had received either child behavioral services or parent education services in the previous 12 months. Seventy-two caregivers (25%) demonstrated need for behavioral health services, and only 23 (25%) of these received services.

In bivariate analyses, no associations were found among children in need between receipt of services and family characteristics (caregiver education, caregiver employment, household income, primary language spoken, health insurance, the presence of both parents in the household, caregiver psychological distress, level of family need, and immigrant status). The caregiver's perception of need for services significantly predicted use of services ($OR=7.6$ for child services, $OR=7.4$ for caregiver services, $p<.01$). Level of family need was also positively related to child and/or caregiver service use ($x^2=15.07$, $p=.01$). In a multiple regression, caregiver perception of need for child services and need for caregiver services explained 31.9% of the variance in service utilization. However, the interaction between these variables was also significant, indicating that the presence of both perceived child need and perceived caregiver need is associated with a lower rate of service utilization. These findings suggest that the transition from need to use of behavioral services is a complicated issue and that the caregiver's perception of the need for services is an important factor in predicting whether services are used. When caregiver and child needs co-occur, service utilization is less common.

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Exploring the Relation Between Need and Access to Behavioral Health Care Among Rural Head Start Children

Carol Amundson Lee, Leanne Whiteside-Mansell, Mark Swanson, Mark Edward, David Deere, Scott Hodnett

The study examined behavioral health services utilized by 249 children at enrollment into Arkansas Starting Early Starting Smart (SESS). The relations among caregiver, child, and family characteristics, service need, and receipt of services were examined.

Study children were enrolled in 1 of 17 Head Start program sites and SESS, a national study that focuses on the integration of behavioral health care. Ninety-five percent of the caregivers were biological parents. Caregivers were 27 years of age ($SD=6.5$ years) and most had at least a high school degree (82%) and worked at least part time (63%). Children were 3.6 years of age ($SD=4.3$ months), 52% were male, and 40% were first-born children. Most of the children were White (77%), 7% African American, 3% Hispanic, and 13% mixed). Eighty percent of target children were covered by health insurance (either public or private).

All data from caregivers were obtained from a structured interview at study intake, usually in the child's home. The Preschool Kindergarten Behavior Scales (PKBS; Merrell, 1994) were completed by the caregiver and the Head Start teacher. The PKBS subscales of internalizing and externalizing behavior were used to classify children as in need of services. Need was examined at three levels. The most conservative estimate of need was obtained by selecting children with percentile scores greater than two standard deviations above the mean on either the externalizing or internalizing subscales as reported by either the teacher or the caregiver. Less conservative need estimates were computed using less than 1.5 standard deviations and 1.0 standard deviation above the mean. Need for services ranged from 10% to 22% to 40%. Caregivers and teachers classifications agreement ranged from 52% to 87%, however the correlation of the range of PKBS showed only moderate agreement (r=.25). Children classified as in need were similar to children not in need in age and gender but had higher internalizing (p=.01) and externalizing (p=.01) scores, lower social skills (p=.02), and higher ratings of child measures of parental stress (difficult child, p=.04).

No associations were found among children in need between the receipt of services and child characteristics (gender, age, or externalizing/internalizing behavior), most caregiver characteristics (age, working status, depression/distress, use of alcohol, education level, parenting responsivity, or psychological symptoms), nor most family characteristics (marital status, number of other children, homelessness, family violence, or household moves). The two characteristics related to obtaining services for children in need of services were: (a) health insurance for the target child, and (b) parents' report of attempting to obtain services.

The same characteristics were examined for associations with parents' attempts to obtain services. Characteristics found to be associated included: (a) working full or part time, (b) household moves in the last year, and (c) report of violent behavior by a significant other in the home. These results suggest that factors associated with caregivers' perception of service need are indirectly associated with the receipt of services. Lack of insurance appears to be a barrier for services.

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The Transition to School: Local Perspectives and Solutions

CHAIR/DISCUSSANT: Lois-ellin Datta
PRESENTERS: Joy C. Phillips, Angela Taylor, Sandra Machida, Helen Raikes, Beatty Brasch

■ Helping Prepare Children to Start Public School: How Communities are Responding to Transition

Joy C. Phillips

This paper reports results of a research study conducted with three Texas communities engaged in developing newly integrated human service delivery systems. The communities profiled in this paper were chosen because they had agreed to work in collaboration with other programs in their community to improve the "transition" of young children from early care and education programs into public school. Each community received a small grant ($5,000) from the Texas Head Start State Collaboration Office to assist with efforts to plan and implement transition activities. The purpose of the study was to understand: (a) how each community had conceptualized the process of transition, (b) how each had organized their efforts, (c) what activities had resulted from the early efforts, and (d) how parents perceived the effect of the transition activities.

Data were collected for this study using the qualitative methods of focus group meetings and interviews with organizational representatives and parents in each community. The data collection process began with a joint focus group meeting of key representatives from the three communities. Using the information provided at this focus group meeting, the researchers scheduled a set of meetings, interviews, and visits in each community. During the site visits, the researchers observed early childhood programs (i.e., Head Start, Even Start, kindergarten classes), and talked directly to program staff and parents.

Recent research conducted on a school-community collaboration for family literacy (Phillips, 1999) suggests that effective collaboration initiatives evolve through a set of five developmental stages. Using this developmental framework for analysis of the data collected in this study, a view of the transition efforts emerges that illustrates how each community has responded to the process in an individual manner.

Each of the communities conceptualized the process of transition differently, which led to each identifying a unique set of stakeholders (stage 1). Two of the Transition Projects were led by staff from the local school district; the third project was led by staff from the Head Start program. All three communities included stakeholders from the early childhood community, but one included an array of other community human service providers as well.

The national STEPS training model (Byrd & Rous, 1991) was cited by representatives of all three communities as being especially helpful in providing a mechanism for community teams to set goals (stage 2). The scope, organization, and details of each community's goals were, however, based upon perceived local needs and available resources. Nevertheless, all community representatives agreed that the number one goal was "to provide a seamless transition for all children" in the service area.

The three communities in this study are in the very early stages of implementation (stage 3) of their transition plans. The data did suggest, however, a variety of interesting activities and strategies that other communities can consider. Initial data reveal that each community is on the way toward establishing the Transition Project as a uniquely positive feature of the community (stage 4). On the other hand, all community representatives agreed that determining measures to assess effectiveness (stage 5) of their efforts might be their greatest challenge yet.

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■ Changes in Family-School Relationships Following the Transition to Kindergarten: Research Findings and Implications for Practice

Angela R. Taylor, Sandra Machida

The present research involved a prospective, longitudinal study of the social and academic adjustment of former Head Start children following the transition to kindergarten. The study had three main purposes: (a) to document changes in parent involvement and teacher-child relationship quality that occur between Head Start and kindergarten, (b) to examine the effects of these changes on children's social and academic outcomes in kindergarten, and (c) to identify factors contributing to changes in parent school involvement and teacher-child relationship quality.

The study participants consisted of 57 former Head Start children (54% males, 75% Mexican American, 46% Spanish-speaking, mean age = 6 years), their primary caregivers (93% mothers), and their teachers (Head Start, *n*=11; kindergarten, *n* =42). At the end of Head Start, children's cognitive verbal ability was assessed using the Peabody Picture Vocabulary Test-Revised (Dunn & Dunn, 1981), and behavioral characteristics were assessed using the Teachable Pupil Survey (Kornblau, 1982) and the Preschool Behavior Questionnaire (Behar & Stringfield, 1974). At the end of Head Start and again at the end of kindergarten, three aspects of parent involvement were assessed: (a) parent school involvement (teacher rating of frequency of parent participation in school activities), (b) teacher involvement practices (teacher rating of frequency of efforts to encourage parent school participation), and (c) parent-teacher relationship quality (parent rating of satisfaction with the parent-teacher relationship). In addition, Head Start and kindergarten teachers rated the degree of closeness, conflict, and dependency in the teacher-child relationship using the Student-Teacher Relationship Scale (Pianta & Steinberg, 1992). The Teacher-Child Rating Scale (Hightower et al., 1986) was used to assess children's school competencies (frustration tolerance, assertive social skills, task orientation) and problem behaviors (externalizing behavior, internalizing behavior, learning problems) at the end of kindergarten.

Repeated measure MANOVAs revealed significant changes in parent involvement and teacher child relationship quality between Head Start and kindergarten. Kindergarten, as compared to Head Start teachers, reported less frequent parent participation in school activities and fewer teacher efforts to encourage or solicit parent school involvement. There was a parallel decline in parent perceptions of the quality of their relationship with their child's teacher. In addition, kindergarten teachers reported having less close relationships with the children than did Head Start teachers.

Hierarchical regression analyses showed that after controlling for child entry characteristics (i.e., gender, cognitive ability, school behavior), decreased parent school involvement predicted more learning problems and lower task orientation, whereas decreased teacher-child closeness predicted more externalizing and internalizing behavior problems, lower frustration tolerance, poorer social skills, and lower task orientation. With respect to prediction of changes from Head Start to kindergarten, findings showed that parent dissatisfaction with the parent-teacher relationship and inadequate teacher involvement practices (in particular, weak efforts to involve parents in program planning and decision-making) predicted declines in parent school involvement. Regression analyses using child entry characteristics to predict change in teacher-child relationship quality revealed that hyperactive-distractible behavior predicted declines in teacher-child closeness between Head Start and kindergarten.

Although our findings must be interpreted with caution due to the small sample size, they do allow us to draw some implications for practice. Consistent with past research, our findings highlight the need to sustain supportive family-school relationships as Head Start children transition into kindergarten. Efforts should focus on forging parent-teacher partnerships that empower parents through opportunities to share in decision-making regarding the child's educational program. In addition, teachers need to understand the importance of having close relationships with their students and may require extra support in nurturing such relationships with students who demonstrate behavioral and attentional problems.

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■ Nebraska Head Start/Public School Transition Effects

Beatty Brasch, Julie Jones, Helen Raikes

(Summary not available at time of publication)

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Bringing Everyone to the Table: Strategies to Support Home/School/Community Partnerships

CHAIR: Catherine Scott-Little
DISCUSSANT: Elizabeth Jeppson
PRESENTERS: Pamela J. Winton, Kate Thegan, E. Glyn Brown, Catherine Scott-Little

Partnerships between home, school, and community service providers are essential to continuity for young children. Full involvement from all stakeholders in the partnership is the basis for continuity as children transition from one context to another. However, achieving strong partnerships with meaningful participation from all stakeholders can be a tenuous and time-consuming process.

This symposium examines strategies for supporting home/school/community partnerships from two perspectives. One study focuses on family involvement in partnership activities. A participatory action research approach was used to examine barriers to family involvement in 11 local Smart Start partnerships from North Carolina. Data from surveys and interviews with participants and key informants were used to document attitudes of local stakeholders toward family involvement in decision making, barriers to family participation, and promising practices for facilitating family involvement in partnerships.

The second study examines the impact of a training curriculum for a document entitled *Continuity in Early Childhood: A Framework for Home, School, and Community Linkages* that was developed to support collaborative partnerships. The *Continuity Framework* outlines eight elements that are essential to successful partnerships. This study utilizes quantitative and qualitative data to assess how the *Continuity Framework* curriculum is implemented and the impact of the training on partnership activities in eight sites across the United States.

Taken together, the studies presented in this symposium examine the context within which collaborative partnerships provide continuity and document strategies for strengthening collaborative partnerships and improving continuity for children.

In addition to studying collaborative partnerships, this research itself is the product of a strong collaboration. Researchers from the Regional Educational Laboratory Early Childhood Collaboration Network have worked closely with service providers from across the country to develop and study strategies to support collaborative partnerships in a variety of settings. The resulting symposium is a thorough discussion of the elements of collaboration and continuity, as well as practical strategies for supporting collaboration between homes, schools, and communities.

■ Is There Room at the Table? A Study of Family Involvement in Community Collaboratives

Pam Winton, Michelle Barrick, Kate Thegen

Local communities have been described as a logical starting point for reform efforts related to young children and families. Many communities have community-based collaboratives or boards whose purpose is to promote continuity across agencies and services. Broad guidelines for effective interagency community planning have been developed and disseminated; an underlying premise of these guidelines is the importance of including nontraditional stakeholders, such as families, in planning efforts. However, there has been very little research on the topic of family involvement in community-based boards.

The purpose of this study was the following: (a) to provide information on the ways families are typically involved in community-based interagency boards; (b) to assess the attitudes that key stakeholders have toward family involvement in community-based decision making; and (c) to identify barriers, facilitators, and promising practices related to family involvement.

The research questions addressed in this study included the following:

1. To what extent is the North Carolina Partnership for Children's value for family involvement in decision making shared at the local level?
2. To what extent are families meaningfully involved in Smart Start decision making?
3. What are the barriers, facilitators, and "promising practices" for family involvement in board decision making?

Eleven North Carolina communities who had recently received Smart Start money were identified as study sites. A multimethod strategy was used that included observations of local Smart Start board meetings, a written survey of community members, and key informant interviews.

According to the findings, survey respondents viewed parents as important and qualified to make decisions about how Smart Start money was spent, but not as involved or as having influence on decisions, when compared to other stakeholder groups. Key informant interviews indicated that Smart Start executive directors and board chairs think parent involvement in decision making is important. However, there are numerous challenges that boards face, including recruiting and retaining parents on local boards and defining the role of parents on boards (e.g., Who do parents represent? Are mandated slots necessary?).

Analysis of the interview data indicated that three major factors impact the extent to which parents are meaningfully involved in board activities and decision making: structure, logistics, and climate. Structure includes factors such as board size, orientation procedures for new members, protocol for conducting meetings, and so forth. Logistics include whether transportation, child care or reimbursement for expenses are provided when meetings are held, and so forth. Climate includes feelings of support, involvement, intimidation, use of jargon, and so forth. These factors are more likely to be described as impediments rather than supports, validating the fact that parent involvement on boards is a major challenge. Climate is an especially important factor, with a prominent theme being that parents on the local boards feel intimidated.

Although parent involvement in board decision making is important, it is hard to implement and is a challenge that will be not solved easily or through superficial approaches. Solutions must address meeting logistics, meeting structure, and overall climate. Climate is especially important from the perspective of parents, and this is probably the factor that is most often ignored since it is more complicated and difficult to understand. Our findings validate the findings from an earlier study on parent involvement in board activities conducted with Year 1 and Year 2 Smart Start Partnership boards (Cornish & Noblitt, 1997). This suggests that meaningful parent involvement in Smart Start boards has been an enduring challenge for local Partnerships.

Reference

Cornish, M., & Noblitt, G. (1997). *Bringing the community into the process: Issues and promising practices for involving parents and business in local Smart Start Partnerships.* Chapel Hill: University of North Carolina Smart Start Evaluation Team.

■ The Continuity Framework: A Tool for Supporting Home/School/Community Partnerships

Glyn Brown, Catherine Scott-Little, Lena Ko, Tim Speth, Judy Caplan

Services to young children should be coordinated and should build upon each other to fully support children's development. However, achieving continuity across various settings can be a daunting task for service providers and families. Funding streams, regulations, and openness to cooperation vary across communities and across programs. The result is often an uncoordinated patchwork of services. To improve continuity for children, many communities have established collaborative partnerships. Partnerships that fully involve all the relevant partners—home, school, and community—in planning and monitoring services provide greater continuity for children. While the composition of such partnerships varies according to the community, families have the most at stake in the process. Nonetheless, they often feel excluded or unimportant in the process.

To provide a tool for community partnerships to facilitate full participation of all stakeholders, the 10 Regional Educational Laboratories developed a document entitled *Continuity in Early Childhood: A Framework for Home, School, and Community Linkages*. The *Continuity Framework* outlines eight essential elements of continuity and successful partnerships that are the basis for successful family involvement and partnership outcomes. As part of a validation study for the *Framework*, pilot sites indicated a need for additional support to ensure that partnerships could fully implement the *Framework*. In response, the Laboratories developed a *Trainers' Guide* to accompany the *Framework* that provides directions, activities, and handouts for using it. This study assessed the use of the training curriculum and identified how elements from the *Framework* are being incorporated into partnership activities.

The research questions addressed in this study included the following:

1. How successful is the training provided through the *Trainers' Guide*?
2. How do partnerships incorporate elements of the *Framework* into their ongoing activities?

Data were collected from eight collaborative partnerships from across the nation, with site selection based on expressed interest in the project. Each site conducted the training sessions and collected follow-up data for approximately 6 months afterward. A multimethod strategy was used that included a written survey of partnership members, a record of stakeholder attendance, and documentation of partnership activities.

According to the findings, most of the participants rated the overall quality of the training sessions as "good" or "excellent." Participants also reported that as a result of the training, they have a better understanding of continuity and are motivated to help build continuity within the community.

Preliminary results of follow-up data indicate that many of the participants have continued to use the *Framework*. A majority agrees that the *Framework* has been a useful document in supporting partnership work, and many report that they have incorporated elements of it into their partnership's plan.

Creating continuity among services for young children is essential. Full participation from all groups—home, school, and community—will help to support children's development and transition between settings. Our findings indicate that the *Continuity Framework* and its accompanying *Trainer's Guide* is one tool that partnerships can use to ensure that families (and other stakeholders) have a meaningful role in the planning process.

Reference

Regional Educational Laboratories' Early Childhood Collaboration Network (2000). *Continuity in Early Childhood: A Framework for Home, School, and Community Linkages*. Talahassee, FL: SERVE.

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Research and Policy

Head Start Research Initiated by State Associations

CHAIR: Gregg Powell

PRESENTERS: Daryl Greenfield, Carmen Nicholas, Joanne Sorte, Aphra Katzev, Taube Gensler

Gregg Powell: One thing we have been working on for the past few years has been to devolve—a popular word right now in Congress—the idea of research down to the local level. As a national organization, the National Head Start Association (NHSA) has affiliates in each region and state. It became apparent to us over the years that things happen at the state level. Regional levels are where monitoring takes place and money flows, but politics and the reality of what happens with children take place at the state level.

Some of the most famous research, which has absolutely nothing to do with Head Start but is used to promote Head Start, is that for every $1 invested in early childhood programs, $7 is saved. Obviously, this came from the Perry Preschool Study, which did not include Head Start, but we do like to think that a quality Head Start program has the same types of impact on savings. The study established that of those $7, $5 of them are state dollars. Most of the savings and benefits that come from early intervention, as proposed by that model, are in the areas of reduced school retention and reduced criminal activity—all things that states spend money on.

Over the last decade, states have become much more active in promoting early childhood development. It was important to continue to encourage that and to build upon it. One of our focuses over the last 5 years has been to promote the idea of having a research base at the state level. In the national organization, we have a research and evaluation committee that oversees and sets goals. We felt it was important at the state level to have the same kinds of things.

We have been successful in a number of states. Three states— Florida, Oregon, and Arizona—have been in the forefront. Representatives from these states will discuss the issues they face, what they are doing, and some of the ways they have solved their problems.

Each state has approached it from an entirely different way. Daryl Greenfield, from the University of Miami, and Carmen Nicholas, from Palm Beach County Head Start, will speak about Florida. The Florida Head Start Association is unique in that its members chose to establish a research committee under their association. This committee is made up of representatives from Head Start programs that have already succeeded in making their program a part of our quality initiative, which is similar to an accreditation in that programs must apply and go through a series of reviews to achieve certain levels. Most of the directors on this committee are from those programs. Representatives from each of the major universities were also invited to serve on the committee.

Joanne Sorte and Aphra Katzev are from Oregon State. As we talked about earlier, states are more interested in what is going on in Head Start and what is going on in early childhood. Oregon is one of the few states to recognize that Head Start is already out there. The state chose to put most of its preschool money into Head Start programs and establish funding for Head Start at the state level that matched or went along with the Head Start performance standards.

Many legislators were interested in what was going to happen to their money. The concept came up that they needed research. We presented what happened with FACES and other research, and one of the senators asked what was happening with their money in Oregon. Thus, Oregon had the idea that they were going to do their own research to find out what was going on in the state.

Taube Gensler is from Southwest Human Development, which is one of the larger grantees in Phoenix, Arizona. They started with the area of health, since that is one area where Head Start has had the most dramatic effects and is one of the easiest to track. However, we do not pay a great deal of attention to the benefits of the health component.

Carmen Nicholas: Florida is a culturally and ethnically diverse state. Head Start programs in Florida are as culturally, ethnically, and programmatically diverse as the state is. Seventy-three agencies provide Head Start services in Florida, including: (a) 14 community action agencies; (b) 17 private or public school systems; (c) 35 private or public nonprofit agencies, such as the Broward County commissioners; and (d) 7 other government, non-community action agencies.

During the 1998-99 school year, a total of 32,815 children, from birth through age 5, were enrolled in Head Start programs with all but about 770 of those more than 3 years old. We have a few Early Head Start programs in Florida, and the numbers are growing.

Approximately 74% of the children were enrolled in full-day programs, that is 6 hours or longer, and 24% were in part-day programs. Most of the enrollments are center-based with the remaining children in home-based programs. Most of the programs are full year, except for some of the school district grantees.

The majority of the children, 61%, are African American, 19% are Latino, and 18% are White, with only a small percentage of American Indian, Asian, and Pacific Islander children. Within the Latino community, there are several different cultures that are characterized typically within the African American community—people from the Caribbean, the West Indies, Haiti, and other areas. Approximately 2,000 children are served in migrant Head Start programs.

The Florida Head Start Association Research/Readiness Committee is an official committee of the Florida Head Start Association that was started a few years ago. Before we were a Head Start Association, we were a Head Start Directors Association. About a year ago, we became an affiliate of NHSA. The committee is structured as a practitioner-researcher partnership model. The current membership consists primarily of Head Start directors from Achievement and Excellence Award programs. There are also several university partners. In total, there are 10 Head Start directors and 8 researchers. Our other key partner is Region IV. We also have several staff advisory committees throughout the state and other staff members from education, family services, and other disciplines on our committee.

The committee was formed in response to increased national, state, and local emphasis on school readiness. The committee is responsible for developing accountability and results-oriented evaluation for publicly funded programs. It started because Florida has the largest number of programs that have gone through the quality initiative, and part of the requirement of the quality initiative that we needed in order to apply for a Program of Excellence was to show what impact, both short- and long-term, that our programs have had on children, families, and communities.

The committee partners started to support each other and to find methods to identify our impact. Of course, it does evolve into something much broader: the School Readiness Act. The mission is to promote school readiness, continuous improvement, and quality research within Head Start and other early education and care programs in Florida by developing a framework for common data collection and analysis and by developing policy statements. One of our partners, the Florida Head Start State Collaboration Office, provided some of the funding for the initial planning.

Committees and goals were formed during two strategic planning sessions that occurred, one within the 1st year and the second in December of last year. Six goals were identified, and six committees were formed to manage those goals:

1. Use a diverse committee membership to conduct committee tasks—we have been strengthening our membership as we go along;
2. Update and implement a framework for achieving committee goals;
3. Secure funding and other needed resources;
4. Develop a system of internal and external communication for ongoing collaboration and visibility;
5. Develop a research framework that addresses the commonalties and diversities across population, programs, and data; and
6. Use research findings to strengthen the quality of Florida Head Start and other early education and care programs.

Community and university partners have been most helpful with respect to goal five.

Daryl Greenfield: As Carmen Nicholas mentioned, our committee has been in existence for a while. Fortunately, since the committee has been in existence, we have been able to take advantage of opportunities that have occurred.

For example, this past October, the State of Florida passed what has been called the School Readiness Act. This is major legislation in the State of Florida aimed at reorganizing all of early childhood education, 0 to 5, in the state. It is a comprehensive piece of legislation, and there is not enough time to talk about all of its implications and components.

One area of the new legislation is in regard to trying to understand readiness. A system will be developed in the next year or so to assess children's readiness for kindergarten. Eventually, all children in the State of Florida will be assessed for their school readiness. In order to do this, the Governor appointed a workgroup to design this assessment system. Since our group was already formed, we were able to petition the committee to make sure we had representation on the workgroup. As a result, we have been able to have an impact on how the legislation is going to be implemented.

The advantage for us is that although readiness is going to be assessed at kindergarten at the state level, we want to be able to look at readiness within Head Start. We will have an impact at the state level, since our committee has representation in the workgroup. This will potentially allow us to coordinate what we are doing in our community with Head Start throughout the state, as well as to have an impact on what the state is going to do with respect to kindergarten.

The issue of school readiness turns out to be a complex issue. Although it has been a rallying point in many states in terms of policy and in research, school readiness is not a good concept to guide policy. An effective guide for policy must have a clear definition and be easily measurable. It turns out readiness is not such a concept. There are multiple ways of defining and interpreting readiness. Some view readiness as being something that resides inside the child and, in some cases, that might be viewed as maturational or as environmental, due to instruction. People also have looked at readiness in terms of the schools and systems that children are moving into: Is the school ready for children? What does the school need to do to become ready for children? Also, they look at the support structures of society in general in terms of readiness.

The concept of readiness is not necessarily easy to evaluate. Nonetheless, we have begun to do that at the state level. The state workgroup has begun to define readiness similarly to what has been done at the national level in terms of the National Education Goals Panel through a report that came out a few years ago. Again, they struggled with the notion of readiness. In defining readiness with respect to the child, they argued for the inclusion of five domains of readiness. In Florida, these domains have been expanded to six instead of five. For example, the National Education Goals Panel considered motor development and physical health to be a single domain. In Florida, we have a large population of children who are at risk, and there are health concerns. As a committee, we wanted to separate health from motor development and treat that as a separate domain. At the state level, a series of guidelines are being developed that will lead to an

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assessment in kindergarten focusing on these six domains of readiness: (a) physical health, (b) approaches toward learning, (c) social and emotional development, (d) communication/language development, (e) motor development, and (f) cognitive development/general knowledge.

This is advantageous for Head Start and our state group at the Head Start level because if one looks at how Head Start has defined readiness in terms of program goals, they are almost identical to these six goals that have been established for kindergarten readiness.

The FACES study is attempting to determine what the goals should be for Head Start in terms of children's growth and development. If one looks at these goals, such as improved literacy, numeracy and language skills, general cognitive skills, fine motor skills, positive attitudes towards learning, improved social behavior, and improved physical health, they are identical to the six domains that the state is now going to assess at kindergarten entry. Thus, there is continuity between what is expected in Head Start in terms of program goals and what the state is going to be looking at in terms of preparing children for school.

The committee for goal five is focusing on developing a research framework that addresses the commonalties and diversities across population programs and determining a common structure for data collection within Head Start across all of Florida to be able to look at some of these issues.

Head Start should be consistent with what children will be expected to know when they enter kindergarten. Our committee will be able to develop this goal in a way that will prepare children to be ready for school, improve curriculum and program quality, and give us accurate information about Head Start effectiveness in terms of school readiness.

Researchers and Head Start directors are working together to test our programs. The idea of the partnership approach is to begin to develop a sense of trust and to use complementary knowledge and skills to work together and to partner. Each group brings different information to the table and that information is used in a way that can produce good research that is useful to both practitioners and researchers. These are just some examples of the roles practitioners and researchers can play.

Our committee has been conducting workshops with Head Start directors, and eventually, we hope that this will include staff as well. We are trying to make Head Start directors aware of what is going on at the state level in terms of defining readiness. There is a great deal of nervousness about how programs will be evaluated: Are Head Start programs getting children ready for school? What is going to be done? What is going to be assessed?

We meet with directors and assure them that the types of things that they are doing in their program are right on target for what the state is going to assess. We review the six domains and discuss what is already being done in Head Start to show the directors that there is a good match between what they are trying to accomplish in their programs and what the state will end up expecting in terms of readiness.

We are trying to get directors to think about this in a practical sense. We ask them, for example, to think about what types of things go into each of their programs that support a child's development in each of these six domains. Initially, directors are nervous about this whole process, but we set up small focus groups where they meet to discuss this. They are surprised at the number of things that are already being done in their programs that address these domains.

We also ask them what they have been measuring about their children that would provide results and some outcome data related to each of these domains. They already are collecting data about their children that will address this readiness issue.

Our committee developed a survey that covers a variety of information that could potentially be collected on children, families, and program components. We sent these surveys out to all 70 programs for them to complete in order to determine what information is currently being collected. We are going to analyze that and try to determine what common measures are already available for us to begin to plan common data collection. We hope to take the common dataset and find a way of linking all the data together to look at the various programs.

There are statistical techniques that address the nuances of looking at children's individual growth curves and to what extent those growth curves are affected by characteristics of individual children. We will look at the factors that produce differences in children and how they change and grow over a Head Start year. We can look at individual child factors as well as program factors because this hierarchical linear analysis allows one to nest children within a particular program or within a particular type of program and obtain analyses and data that will consider child, family, and program variables.

We completed the first two components and will continue to do workshops and analyze data. We are searching for funding to begin analyses that will provide information about program quality.

Joanne Sorte: I am speaking as a member of the Oregon Head Start Association. I am a Head Start director and also direct the student training and laboratory preschool programs for Oregon State University.

The Head Start program that fits the needs of children and families in Oregon is different. I will begin by discussing the process of creating a collaborative agreement with research programs and individuals in our state. Aphra Katzev will discuss our program and project specifically.

We owe a debt of gratitude to Dell Ford, who was a Head Start fellow and is our collaboration project coordinator for Oregon. As a fellow, she had the opportunity to meet with Gregg Powell and learn about Head Start's interest in creating research collaborations in states. She then came back to Oregon to our Head Start Association meetings and in our director's network, presented her enthusiasm for possibilities at the Oregon Head Start Association level.

As a group, we needed to look for ways to become more active in our state, both in sharing the story of Head Start and in creating our own database and voice to advocate for policy within our state. One of the reasons this is important for us is that for the last 15 years Oregon has funded Head Start, which is called Oregon Head Start Pre-Kindergarten Program. It is a program that directly follows the Head Start model and Head Start performance standards. As Head Start grows and develops, Oregon Head Start Pre-Kindergarten evolves as well.

The funds come from state taxpayers and each biennium, we look toward our legislative body to continue to help us grow into our goal, which was originally to serve 100% of Head Start eligible children by the year 2000. We are now serving 50% of eligible children, and it has been a fight to get to that point.

Research is a way to inform ourselves about what we look like, what we can do, what we are doing well, and where we need to improve. Also, it allows us to collect information to share with our legislative body, the early childhood community in our state, and our student training programs. Finally, research enables us to achieve what Head Start is—a grassroots, community-based program that provides excellent opportunities for young children and their families.

We got started through directors' discussions at Head Start Association meetings, which quickly moved out of our directors' network into the general body of discussion. We convened a research group made up of Head Start friends, parents, staff, and directors. Additionally, the research group and the issues group meet to discuss progress and to share information with all Head Start partners.

The importance of this is from the process point of view. By engaging from the beginning with parents, staff, and directors in creating our research committee and informing our research core group, we are laying the groundwork to raise everyone's awareness about the value of creating programs, policies, curriculum, and ideas based on what we have learned about services for children and families. Thus, we are engaged in a collaborative effort. We have not achieved our goal entirely, yet. We are still trying to find funding.

To begin with, we convened a group of interested parties—representatives from Head Start programs and the early childhood community in our state as well as members of legislative bodies. We also invited researchers from colleges and universities around the state and private research groups. Gregg Powell from NHSA and Michael Lopez from ACYF attended and provided an introduction to the FACES project and some preliminary findings, which gave us something to focus on to help us in our initial planning. They also presented this information before the education committee of the state legislature.

What is happening between children and families in our program needs to be expanded and made available to more children, and we need to find ways to tell the story.

We focused the second day of discussion on what research could look like in our state and what characteristics of our state make it necessary for us to do research here rather than easily taking the findings of the FACES project and extrapolating them to Oregon. This discussion was wonderful because people came from all over the state—from rural and urban areas. We had representatives from minority groups and migrant Head Start programs as well as Indian Head Start representatives from various areas. We are also growing in cultural and ethnic diversity. This was a wonderful opportunity for us to determine the information that we wanted to learn about our state and to begin to realize that we cannot answer all of those questions.

This effort evolved into asking people to make a commitment to convene as a core research group. Currently, that group has continued to gather and hone a research project that would be appropriate for Oregon. We learned there was an interest in finding ways to partner with projects that were already taking place in Oregon, such as in school reform and in the early childhood communities in the state. All of this information was brought together to create the plan that we are working from now.

We want to make sure that people feel confident that once the information is gathered, it will become part of a composite. The process piece has been important in moving Head Start into a leadership role in our state. It is also something that the Head Start Association has put their funds behind. We also partnered with the Department of Education, where our collaboration project is housed.

Aphra Katzev: I will begin by discussing what Oregon has been doing for the past 10 to 15 years in the area of research and measuring outcomes for children and families.

In 1989, after a series of community meetings, focus groups, and general thinking, we tried to establish a vision of the future for Oregon—what Oregon would look like in the year 2000. We established a series of benchmarks, through legislative mandate, related to people, the environment, and the economy. There were 267 benchmarks established originally in these three areas. They related to diverse issues, such as maintaining the salmon runs, increasing the economic viability of the state, and insuring children were ready for school at kindergarten. At the same time those benchmarks were established, there were funds made available to set up an agency under the Governor called the Oregon Progress Board to measure progress towards these benchmarks.

This is all part of the state government's effort to make an impact—using state funds to enhance the quality of life and well-being for citizens in Oregon over time. Every agency in Oregon that has state funds is mandated to show their progress toward a particular area of these benchmarks.

In the child and family area, we are focusing on nearly 50 benchmarks. Particularly for children up to age 18 and families, we are focusing on 15 benchmarks, such as reducing the rate of child abuse and neglect, increasing school readiness, increasing the number of families with early comprehensive prenatal care, reducing drug, alcohol, and tobacco use at different levels of school, and so forth.

In this atmosphere, our research group came together to hear about FACES and the preliminary findings on Head Start quality from Michael Lopez and Gregg Powell. We thought that the presentation made a lot of sense and incorporated it into our focus—the school readiness benchmark.

Our research group began to form with people from the University of Oregon; Oregon State University, where there is a strong program in teacher education and early childhood education; Portland State University, where there is also a strong program in teacher education and early childhood education; the Northwest Regional Education Lab, which has been doing some preliminary work on where children are in terms of school readiness; our state organization; and Region X's Early Childhood Quality Center.

We began to talk about how we could build on the FACES evaluation and link it to the work we were doing vis-à-vis school readiness. We decided to take components of each and look at three research questions: (a) What is the impact of Head Start on the school readiness of children who participate? (b) What is the character of Head Start quality across the state of Oregon and how does it relate to national patterns? and (c) Is program quality linked to school readiness?

Capitalizing on the FACES project and on what we were hearing from the Head Start Association, we wanted to look at the quality of Head Start centers across Oregon. We began to determine how we were going to sample kindergarten teachers, children, and programs. We started thinking about a stratified random sample chosen from urban and rural locations and figuring out how to stratify it. We were going to consider ethnic, geographic, and linguistic variations. Then, we began getting more specific about selecting programs, and many programs wanted to participate. However, the programs had very different ideas about what they needed and wanted from the research and it became clear that there was going to be tension between research and practice.

We decided that, perhaps, for Oregon it would be more useful not to deal with a randomized sample, but rather to include everyone. Then, we began to determine if we could include everyone. We were looking at a sample of essentially 6,000 children in 33 programs in 36 counties—programs tend to be more or less county-oriented. This was getting to be a big project, and we were wondering what the costs were going to be.

We began to think about existing data or information we were already collecting that we could perhaps use in a research design. We made a politically motivated decision to try to look at everybody. We knew legislators were going to be asking us, "Well, what about my county?" The head of the appropriations committee at the state legislature is from a small town in Eastern Oregon where there is a Head Start program, and we knew he was going ask us about the children in his area.

Although many concessions are necessary, one does not have to give up reliability or validity. There can still be some control over these things, and everybody wants to have control because they want accurate information.

We decided we were going to look at the character of Head Start quality across the state. Once we had measured quality in all of our programs, we wanted to know how it related to school readiness. Thus, we also had to measure school readiness across the state.

Our next step was to examine what we were already collecting and decide how to pull it together. Similarly, we talked about an HLM analysis because we have these different levels of data collection. We realized we had already been collecting some readiness data. If one looks at the measures of readiness that we are using and knows anything about early childhood and measuring school readiness, it will turn one's hair white to look at our measures. They are only proxy measures.

What we decided to do for population-level data across the state was to capitalize on the Carnegie Corporation study where kindergarten teachers were asked about the school readiness of the children coming in. We decided we had limited funds and that this study would provide a baseline, although there are many ways to look at readiness. Since Carnegie has some national data, we would have that standard to use when we were doing comparisons in Oregon to the national standard.

We used the Carnegie study questions as a baseline. We went to the National Education Goals technical report on goal one and used the five areas of development. We identified questions from the Carnegie study that related to each of those areas, using two questions for social-emotional development and two questions for physical and motor development—a total of seven questions/characteristics. Then we asked kindergarten teachers statewide to rank every child in terms of those seven characteristics. Thus, we had data by child.

This was the first piece that we had done in terms of school readiness, and it was low budget because it was part of the annual school survey that the Department of Education sends out. Much of our information was similar to what the Carnegie report had found: 66% of our children had at least four out of five of those characteristics.

We made a proposal to OERI (Office of Educational Research and Improvement, Dept. of Education) for this replication in essence, but our proposal was not funded. Practitioners thought the proposal was excellent, but researchers had strong criticisms. They wanted to know why we did not sample.

We went back to the legislature, but we did not have enough clout to be heard by the emergency board for extra funding. We will do it in the next legislative session. We will be funded either through the legislature or through some foundation support, since it is a good idea and the collaboration is strong. The other piece to the collaboration is who is going to do what.

In conclusion, we have the idea, we have the group together, and we have some state support. We do not have the funding yet, and we still have to sort out some of the collaboration.

Taube Gensler: I work for Head Start in Arizona as a program planner and also provide technical assistance to the Arizona State Head Start Association for the collection of data.

In 1997, the members of the Arizona State Head Start Association, many of whom are directors, expressed some interest in researching, developing, and implementing an outcome study. Part of the reason for their interest was that the Program Information Report (PIR) was not providing enough information. All Head Start grantees must produce a PIR at the end of each year. It counts the number of children receiving services, but it does not look at how well we are serving our families. We wanted more information on how our program is working—information for self-evaluation as well as for continuous program improvement.

Arizona is a diverse state. We have 21 reservations in the state, and we run the gambit from rural to urban areas. We have seven Head Start grantees covering 13 counties. We have approximately 12 to 13 tribal programs, and several migrant programs. The main participants for the outcome study were the seven grantees. In the future, we would like to involve the rest of the Head Start programs in Arizona.

The initial goal for the project was to look at the before and after picture of children and families. How were they doing when they first walked in the door and after they left Head Start, and did they receive the services that they needed? This information would be used for continuous program improvement as well as for self-evaluation.

Funding came from the Governor's Office, the Head Start State Collaboration Project, and Southwest Human Development, a nonprofit agency that also has a Head Start program. Under the Arizona State Head Start Association, there is a research and evaluation committee that has been around for several years and is made up of program planners and directors from across the state. We meet monthly, and it seemed natural for this project to come under that committee.

We looked at the research considerations before we started this. We hired a research consultant because most of us at the committee level are practitioners. We were concerned that the data tie into our Head Start program goals and be relevant to program implementation. We wanted information that was reasonable for the Head Start programs to collect and input into their data systems. This is a voluntary project, so we were concerned about staff time. We did not want it to require a lot of staff time. We had buy-in from all seven grantees.

Our main research question was: How successful is Head Start in serving our families, and is Head Start ameliorating problems or concerns? We did not have a control group because we wanted to keep it simple, but we were looking internally about how we were serving our families. We divided the research into three areas: health, family development, and child development. We started with health because we knew that all Head Start agencies were collecting this information. Also, it was the area where we would probably have the most success. All the health managers from across the state met with the Research and Evaluation Committee in 1997-1998 to discuss the issues they encountered, challenges they were experiencing, and their successes.

We wanted to make sure that we looked at children that we had spent the most time with. Thus, we looked at children who were enrolled in their first year of Head Start, who were 4 years old by September 1st, who were enrolled by October 1st, and who were still enrolled through May 1st.

We collected health indicators in 1998-99. One of the unusual things we did with the physical and dental exam was that as soon as the family enrolled in the program, we encouraged them to get physical and dental exams and to see a doctor. We compared the number without a physical exam at 6 months, the number without a physical exam at 3 months, and the number without the physical exam at enrollment. There was a decrease in the numbers from 6 months to 3 months and to the present. In the second data point, we looked at those at enrollment without the physical and dental exam to see how many had later received the physical and dental exam.

Family development was a more difficult process. We began with demographics because we wanted to paint a picture of what our families looked like. This began in 1998-1999 and took a great deal of time. We realized as an association and as Head Start practitioners that not all families are the same and that we needed to look at what kinds of issues and concerns families had in their development in our program.

We replicated the Alaska Head Start program by looking at three levels. The first level was a family who needed basic services frequently and who was in crisis and experiencing abuse, addiction, or trauma; the second level was a family with occasional need; and the third level was a family with minimal need. This gave us a picture of the family, because we cannot expect a family who is in crisis mode to make achievements within education or other areas.

We chose four indicators for family development, which is something that Head Start has not looked at traditionally in terms of collecting data and information. We looked at parents' education. For those parents who had less than a high school or GED diploma, we looked at those who were enrolled in a program, those who were interested but not enrolled, and those who were not interested at all. Then, we looked to see if by the end of Head Start, they had enrolled, if they had continued on to the next level, or if they had graduated.

We did the same for limited English proficiency. We have a number of families who need English as a Second Language (ESL) services or adult basic education services. We were looking at those same questions—if they were enrolled in a training program, and if by the end of Head Start, had they stayed enrolled or never enrolled.

For employment, we looked to see if parents were employed and if they were seasonal, full-time, or part-time workers. At exit, we wanted to know if they continued to be employed, and if they were unemployed, why they were unemployed.

For poverty level, we realized there are many families who are below poverty level. We looked at those families who were at 50% of poverty level, at 50-75%, at 75-100%, or above 100% at enrollment to see if they were at the same level or at a higher or lower level of poverty at exit. This is the first year that we collected that information, and we are still collecting it, so we do not have results from it yet.

For child development, we gathered all the educational coordinators from the across the state and met with the Research and Evaluation Committee each month for a year. The grantees will be submitting basic descriptors for this next year.

For school readiness, all our grantees use different curriculums and different assessments. We did not think it was reasonable to have the grantees adopt one assessment. We decided to look at developmentally appropriate assessments and develop a few questions that we could look at. This would be a survey that would be given to the parent and teacher of each child in the study. We would ask a question about the recognition of names of products, such as fast food or toys, and if the children were interested in writing. The parent and teacher would answer "never," "sometimes," or "always."

For disabilities, we asked about the number of children who were certified as disabled and then those that were decertified at the end of the year. For mental health, we asked about the number of children with atypical behavior and the number with typical behavior.

For parent involvement, at the first data point, we provided a survey to parents asking them what their belief was about parent involvement—what part should a parent play in their child's education? They could answer "never," "sometimes," or "always." Then we asked about what kind of time the parent had to volunteer in the Head Start classroom. For those parents who said "never," we would look at the second data point to see the median number of hours that those parents had donated and the same for those who said "sometimes" or "always." The final question was if they had previous Head Start experience with the child's sibling.

After we go through each tool, the research facilitator meets with individual programs to discuss the tool. The directors also receive a quarterly report from the chairperson at the research and evaluation level.

One of our big successes has been bringing everyone together. For instance, with the health managers, Tucson did incredibly well in getting physical exams completed, and they have rural programs. Other rural programs have looked to Tucson to ask them how they achieved this.

In terms of the future, we want to integrate all three areas, layer the information, and continue to refine this process. It is an organic process that is flowing, and we are working with everyone to determine where things are working and where they are not. We are also interested in benchmarking.

Powell: In 1993, the National Head Start Association established a research committee and a research office within our organization. At the time, we were seen primarily as practitioners, and this was seen as primarily a research conference. This conference has evolved into being a true dialogue between researchers and practitioners. The activities of these three state associations show how far we have come.

At that time, what most Head Start programs thought about research was what happened to them because of the Westinghouse study. They had a negative view of researchers. One of my main jobs was to build partnerships between researchers and practitioners. That is getting easier because of the impact study that is required by legislation and that has drawn a lot of interest again to Head Start.

Today, Head Start directors want to be part of an impact study. I am pleased to see the growth and what has gone on in all three of these states. There are currently 10 states and 4 regions that now have research established at a committee level within their board structure. They may not be called a research committee, but their duties are to plan and carry out research. Our goal over the next 5 years is to expand that to 20 states and to all 12 regions. There are 10 geographic regions and then there are the Indian and migrant programs, which make up the other 2 regions.

AUDIENCE QUESTIONS AND COMMENTS

Question: If you were starting again, what would you do differently, especially in terms of school readiness?

Nicholas: Secure funding to begin to support our efforts. While we are moving fast, the school readiness legislation happened more quickly than we had hoped. While we were ahead in terms of a group and were certainly way ahead of the child care community in being prepared for the school readiness legislation, we were not as far ahead as we would have liked to be. We are still struggling with finding the funding.

Greenfield: Initially, we hired an outside consultant to do strategic planning with the group, which was important. We brought someone in from the outside to help people start to develop trust and determine what a year's worth of planning would be. The process took a few days, but was important because it set in motion an agenda, a set of goals, and an organizational structure in which people already began to know each other and trust each other.

I agree with Ms. Nicholas. Now that we have our committee going there are many things that we would like to do if we had the funding. However, we are just holding off because things cost money, and we do not have as much money as we would like.

Comment: We hired a consultant to write our grant because everybody in our core group was busy and no one had time to do it. It did not work well. We should have written it together and divided the work so we would have had buy-in. Whereas a consultant worked well for you, it did not work well for us because the consultant played a different role.

Greenfield: The way our committee is structured and the six goals that we currently have are good and will move our committee to do research in a partnership fashion and try to understand program quality. Goals are excellent for that. Committee members are volunteering their time because we do not have extra money. If we had more funds, we could hire a staff to do some of the things that now get done slowly.

Powell: There are other people behind the scenes. One needs a visionary: someone that saw long ago that this had to happen and helped move it along. At the state level, one needs a person that is going to take the lead and keep it going until it happens.

Question: Do you think there will ever be a framework that will be adopted nationally or do you think there will always be an individual framework?

Powell: Programs soon will be required to do specific things, without trying to impose too much standardization. One does not necessarily have to use the same instrument. One recommendation is that one should try to use many of the same instruments being used by the Impact Study and FACES if one is going to do any tracking. This will provide a means of comparison. Furthermore, if one uses something that has been standardized and tested, one will know something about its validity.

The Need for Policy-Driven Research in an Era of Program Accountability

CHAIR: Carol Ripple
PRESENTERS: Patrick DeLeon, Jose Puletasi, Lonnie Sherrod

Patrick DeLeon: One of the policy messages I have learned in 26 years on Capitol Hill is that the interpersonal and personal aspects are important. Many people think the importance of the data is what drives decisions. Although it does, interpersonal and personal aspects are really the key and are absolutely critical.

Things have evolved such that even a program like Head Start is becoming locally based. In the past, many people believed that all expertise was at the national level. Now, everybody believes expertise is at the local level. It will change again, but, right now, programs that are going to be creative have to come from the local level.

One has to see that technology is the new driving factor. The recently retired former Surgeon-General of the Army said that he thought mental health care had to be interpersonal and that the provider had to be in the room with the patient. Now, with telehealth, it is a standard operating procedure to have a provider 6,000 miles away and the patient in front of the TV camera. The quality is excellent. In psychology and many other health professions, there is a debate about whether or not the quality of care is just as good as it used to be. Technology has progressed and is quantitatively doing different things and allowing people to think differently.

For something like Head Start, one has to come from the right frame of reference and ask the right questions. Where does one want to bring the program locally? How is technology going to be made a part of it? How will it be funded? One is not going to see this take place at the national level because the gestalt is such that it must come from the local level. With Head Start or any health care or developmental program, the people involved have to look at where the technology is and how it is going to be used to take the program to the next level. People must be persistent.

One of the things I like about Ed Zigler is that he always talks about the importance of high quality care because high quality care tends to make a difference. If it is just a label and not high quality care, it is a waste of money. One has to question, "What is quality?"

I would suggest utilizing graduate students as a major part of it. There is a qualitative switch in society. This is evident in people who are just getting out of college and looking for a way to serve society. The key is that leaders have got to say how they can serve people and lay out where they can go. It is also important to remember those who are already established in health professions within psychology and nursing. Nobody reaches out to use the expertise of these more established professionals. It is important to use this expertise with the technology.

Lonnie Sherrod: I would like to make three points. For the past 10 years, I have worked for a private foundation, an unusual foundation in that we fund primarily research. Philanthropy, in the past decade, has become increasingly concerned with accountability, with demonstrating that what they use their money to do really makes a difference.

One of the reasons people have become so concerned with accountability is that for at least a decade, if not longer, philanthropic organizations have thrown their money, lots of money, ineffectively at social problems. One of the reasons they have been so ineffective is that they have not based where they put their money on what we know from research. They have not designed their programs and policies to deal with social problems based on information. Therefore, this process has not been effective.

One way of increasing the use of research is through dissemination. All of us, whether we are researchers or practitioners, need to assume some responsibility for dissemination. We must get the word out, not just about what we know, but what we know works through our own practice.

There are now a lot of different venues and vehicles oriented toward doing dissemination, including the Board on Children, Youth and Families at the National Academy of Science, Child Trends, and the Society for Research in Child Development.

One of the new interesting areas or developments is that people are increasingly turning to the technology of social marketing in the private sector. For example, people who can convince someone that one soap is better than the other and that that person should buy it, even though they are all the same, are people who really know how to be convincing. These kinds of people know how to convey messages to get people to change, in effect, their behavior.

Even people in academia are beginning to use this social marketing approach. The Center for Children in Poverty, for example, went out and asked the public what its primary issues were. People mentioned taxes, unemployment, the environment, violence, safety, and so forth. However, no one mentioned children in poverty, so Larry Aber from the Center for Children in Poverty said that the issue needed to be raised on people's radar screens. He hired a Madison Avenue advertising firm to design a program that would put "children in poverty" on the flyer that an airline ticket goes in, on the back of Starbucks coffee cups, and things of that nature. The bad news is that this costs an enormous amount of money. Nonetheless, there is technology available for doing this, although those of us in academia have typically not used it.

Thus, the first point is accountability based on research, and the second point is the need for a certain kind of communication, namely dissemination. That leads into my third point, which is a concern for the kinds of research that we have. Typically, research is differentiated between basic and applied. That is a false dichotomy. Research does vary according to the source of the research question and the timeliness or timeframe across which it becomes relevant to social problems and issues.

However, all research is potentially relevant in the way that was described previously. The best example of this is Bandura's work on self-efficacy, which provides the only tools we now have to deal with high-risk sexual behavior and HIV prevention. Yet, when Bandura did that work, no one had any idea it would have that relevancy because AIDS was not around at that time.

We need both basic and applied research. In applied research, we need both policy-relevant research and policy analysis. For example, in the field of child development, people look at the impact of poverty on children. That is policy-relevant research. However, if people are also looking at the impact of TANF, Temporary Assistance for Needy Families, or the new welfare reform law on children, that is policy analysis.

We really have three kinds of research: (1) relatively basic research that does not address immediate social problems, (2) policy-relevant research, and (3) policy analysis. We need all of these kinds of research to help get to the issue of accountability.

Finally, the kind of research that programs and policies are typically attached to in order to have accountability must be reviewed. It does not have to and should not always be what we call evaluations, in terms of asking whether or not a policy or a program works.

All programs and policies are basically experiments. For example, people think if they do A, B, and C, that it is in some way going to affect X, Y, and Z. The first step in attaching any research to that program or policy is articulating that theory of change. Then, research simply becomes a test of that theory, like any other theory-driven research. It does not have to be a specific evaluation.

Typically, research is thought of in terms of looking at relationships between the independent variables and the dependent variables in program. In other words, research is thought of as having to be an experiment. Experiments are good because they are the one way science has to definitively demonstrate causality, which is convincing to policy makers.

However, 90% of what we know about children is not based on experimental research; it is based on correlational-type analyses. Children are not randomly assigned to experimental and control groups in terms of the quality of their parents, whether or not their parents are abusive, the quality of schools, and so forth. So much of what we know about children is based on correlational regression-type analyses that demonstrate relationships. More of this kind of work is needed when looking at the interaction between program variables and child outcomes. One looks upon a program as the context for development rather than as an inoculation or drug that is given as treatment to children.

AUDIENCE QUESTIONS AND COMMENTS

Abbie Raikes: I spent 3 years working on Capitol Hill for Senator Bob Kerrey, handling drug policy. There were some instances where I was disheartened because there was substantial evidence that certain programs did not work. The basic consensus on Capitol Hill was that people were in favor of these programs even though there was substantial research indicating that they were not making the best funding choice. From your perspective, is this a problem that you see, as well? Given that I am on the other side of the table, working more directly with Head Start, how can we try to get those messages across?

Sherrod: One of the messages I convey to people who want to communicate research to policy makers, is that we need to ensure that information is one thing on the table in terms of the policy decision-making process. However, it is not necessarily always going to rule the day.

For example, I remember a number of stories from Ed Zigler, who worked for years trying to create a national child care policy. Child care is an area in which we do not need more research to know what we should be doing in terms of delivering care to children. Yet, it is not possible to obtain the political will for good child care legislation because something else ideological, such as states' rights, always gets in the way. States have the right to decide what kind of care they want to give to their children.

On the other hand, one of the areas I work in is youth service learning. All kinds of national service efforts for youth exist, such as the National Youth Service Act and Americorps. However, they exist without having any idea of what works and what the impact of service on youth is.

Thus, with child care, people know what should be done but cannot get the policy will to do it, and with service learning, people have the political will without knowing what should be done. It works that way sometimes. One still has to work to make sure that what is known does play a role. Therefore, if people pass particular legislation against what is known, at least they will realize what they are doing.

DeLeon: I come from the frame of reference that the individual elected official usually wants to do what makes the most sense. However, few elected officials have the experience that a health care provider has. If one looks up the number of physicians, psychologists, and social workers in the congressional book, at most, approximately 1% of all staff has any kind of health care background.

If something does not work, it does not get much support quickly. If one knows something does not work but does not communicate what would work better, then it is hard for others to understand this. Approximately 20% of the adult population has a B.A. If one has a Ph.D., an M.D., or a J.D., one is in .001% of the educational elite. Most of the educational elite get arrogant. They do not say what we ought to do. They do not have a visual agenda that makes sense.

Right now, we are looking at one of the internal fights taking place between the nurse anesthetists and the physicians who provide anesthesia. The physicians are absolutely convinced the worst thing someone could do for his or her spouse is to let the spouse get anesthesia from a nonphysician, even though nurses have been providing anesthesia for more than 100 years, and there is absolutely no data in this whole discussion.

There are few people on the Senate side, and the turnover rates are high. For example, 85% of the professional staff are not there 2 years later. Five years later, 95% are not there. The person with whom one is talking about what works or does not work probably will not be around the next time one is there.

The educated elite and people who do not want to define themselves as educated elite, with a Ph.D., Psy.D., an M.D., a J.D., have a responsibility to provide a vision as to where society should go. This does not encompass sitting back and complaining that nobody cares about children. A lot of people care about children. However, one has to tell the many elected officials, who are lawyers, not health care professionals, what should be done about children. One has to step in and say that this is where we should go.

The policy issue is interdisciplinary. The world has become too small with technology to just have one subset do this. Nurses now work with pharmacists, as well as with psychologists. One fourth of doctoral-level faculty members in schools of nursing have their Ph.D.s in psychology. What nurses would define as their role is what psychologists would also define as their role. The interdisciplinary approach is the future. One's job is to make sure that it gets funded and implemented.

Sherrod: One of the goals of this general area is to create more marriages between researchers and practitioners. That is one of the things we have tried to do at the Grant Foundation. For example, we bring together the people who have relevant research expertise with the program people. Ideally, that interaction should be reciprocal.

One of the mistakes that the academic community has made is to assume that the flow of information goes only one way—from the research community to the practice community. That is not true. It should be fully reciprocal. The practitioners have as much to teach as the researchers and vice-versa. That interaction has to be structured in a certain way because each has a different kind of contribution to make to the other.

It is intensive to create those kinds of marriages. It is like matchmaking. People have to be personally compatible, as well as have substantive intellectual compatibility. I am not exactly sure what the secret is to making more of that happen. Maybe it would happen if those who are in research go out and find a program to pair with and those who are working in programs reach out to local universities and try to find researchers.

Beginning with the land grant universities, there are a number of universities now that have built university-community partnerships into their mission. There have been sessions at this meeting on this topic, in which the university reaches out to the local community with the idea of bringing the community residents into the university and giving back to the community some of what it has to offer as a place of learning and research. This is one vehicle for making more of this happen.

DeLeon: My perception is that people tend to gravitate to where the money is. If a foundation wanted to do something, they would have to say, "Here is money for that purpose." Then people will do it. If the money is not there, they will not do it. People are too busy, and they do not like to change because change is unsettling. To get people to do something qualitatively or quantitatively different, one must reinforce what one wants. The busiest people can always do something creative, but one has to give them the resources to do it.

For about 5 years, we had a rural interdisciplinary training program that would only get money if at least two deans applied. For example, social work and nursing, pharmacy and psychology, or any other two programs had to apply. They have had some applications for the program, and the money is always spent, but there is not the enthusiasm out there in the health community or educational community to ask, "Why don't we do the same?" Rarely has a teacher's union said, "We need money to work with developmental psychologists to get a higher quality student trained in our system." One does not see these fields crossing. One has to put money out and educate people so they know that they are not locked into their little world.

Sherrod: One has to make the resources available to do this, and certainly there are not a lot of private foundations to do it because they do not really appreciate the value of research. Putting out the money is not enough. The Grant Foundation, in 1980, had a program they called Action Research that was really intended to do just that. However, little was funded because there was either a strong researcher with a lackluster program or a great program paired up with a weak researcher. It was hard to get the right kind of marriage.

Lately, we have tried to identify, for example, six good programs and six relevant researchers to bring together in the hope that maybe one pairing will result. We have had three or four successes like that, but it is labor intensive, time consuming, and expensive. So far, we have not discovered an easier way of making those marriages happen.

Ripple: I would like to reiterate the importance of researchers disseminating work to the policy makers so that the knowledge is there. I know from several conversations with people at the state level that they are concerned with the implementation of term limits. They feel that this places a lot of pressure on them, since they will not have that knowledge base within the legislature and will have to go through a whole scale of reeducation every time a new wave of people comes in. It is a big challenge.

We have talked about the pairing of practitioners with researchers, and I would love to hear Patrick DeLeon say more about something that he has written about—the relationship between policy makers and researchers and the need for researchers to use a language and a format that policy makers can understand.

What is the role of researchers in educating policy makers on the value of some contextual research designs that Lonnie Sherrod spoke about? A Head Start mandate endorsing a random assignment design, which is not always appropriate in an operating program, was just introduced. How can researchers help to expand this sort of knowledge among policy makers?

DeLeon: One wants to start locally. We have a House member from Hawaii who used to be a university professor. He used to be in the State Senate and then on the City Council. Because he was a university professor, it would have been good if people had had him chair hearings on Head Start when he was in his earlier roles. If he had been chairing hearings in the State Senate and City Council about the need for simulation model programs, having a Ph.D., he would have understood it, and it would have been in his head 20 years later when he got into the House. He is now the chairman of the Democratic side of the Armed Services Subcommittee on Personnel Issues. It is highly relevant to where he gravitated, since we know that in Defense, if one wants someone to stay in, the family has to be healthy. Whether the enlisted person is a male or female, if the spouse is not happy, they will not stay, and then one has to pay the extra money for recruitment. Thus, here is a person in a perfect position to have known more about and held a higher value for family simulation models, if for 20 years his university colleagues had been holding hearings on family simulation models. The local constituencies, who eventually go on to be higher-level people, have to be educated on what is being done and what the value is.

What the constituency has to do is to educate these people who may not always be university professors when they are in the City Council and when they are in the State Senate. That is what I do not see. I do not see people asking, "Where should we go with handicapped children?" or "What programs work?" These questions need to be asked to get items like these engrained in the gestalt of the policy maker before he or she becomes Lieutenant Governor or Governor. It is an evolution. Usually, the education process does not begin until somebody is already higher up. Interactions provide a vehicle whereby local associations can have much more impact. Individuals get elected because they want to be helpful. The key then is to give them a vehicle to get information they can implement.

I ask someone who has an advanced degree, "What is the vision? You will be paid to have vision. How are you going to implement it?" If people sit back and want someone else to do the work for them, then those people should not be professionals. They should be asking about what works, what does not work, and how changes will be made. That is what people get paid to do. People get paid to bring information up to whatever level can have an impact, in a way they can hear it and then help shape it.

Christy Lakes: What are the first steps in developing a strategy for dissemination to policy makers? For example, if I produce a report or a paper, to whom do I send it? Should I follow up with telephone calls? Should I arrange to meet with people? Should these be people at the local level or at the state level? Should they be key people working in administration at the state level or the elected officials? If I am working on something related to policy, what should my responsibility be to the academic community, in informing them and making that link between those in academia and those in policy?

DeLeon: To show up is the first big step. It does not make any difference where one shows up because one can only show up so much. One should focus, for example, on the geography where one is. Do anything that gets the elected or appointed official to hear about what it is that one has. Just showing up and saying over and over, "This is what we think you ought to know is important." Interact.

By sitting back, one does not accomplish anything. It does not make any difference where one starts; one should keep interacting. Most people read the paper and watch TV. Think about how to get the ideas into these vehicles that most people see. It is a building process.

Nightline had a special on how the mentally ill homeless in New York City versus the mentally ill homeless at Boston University were handled. Same diagnosis; completely different treatment modules. One is playing Frisbee on the university ground, while the other is being essentially handcuffed, thrown in the back of a police wagon, and taken away because he or she cannot take care of him or herself. Same diagnosis. Obviously, one program works, and one does not seem to work. There has to be a follow-up. Therefore, what is going to be done?

It is the interpersonal interactions that count, and taking a step forward to educate. It may not interest you, because researchers tend to be different from practitioners, who tend to be different from people in the public policy process. One should keep taking steps to find out the world is different.

When my daughter was in an emergency room, the first thing they told me after the first night of hospitalization was that she would be dead by morning. Twenty years later, I am convinced they did not know what they were talking about in terms of the psychosocial aspects of health care. The second day, when they said that she would survive but would be brain damaged for life, I was convinced that that emergency room did not know how to handle children or their families.

In this position, we have done a number of things to change parents' expectations if their child is going to use emergency care. We have revolutionized the definition of emergency care, but have spent a lot of time in the process trying to help emergency room personnel understand how to talk to relatives of the patient. I was dealing with good people at a licensed hospital who did not know what they were talking about. They were licensed health care providers who told me my daughter would be dead by morning and did not tell me what to tell my son. They were wrong. If they were so incompetent, there are a lot of places to improve the world.

Sherrod: Regarding dissemination of reports, there are many known ways to do this, but it is of limited long-term effectiveness. The Carnegie Corporation, for example, produced a number of reports from its Council on Adolescence. Over a matter of time, there were many transitions. As far as I know, they did the best job of anyone at publicizing the release of those reports and getting coverage in *The New York Times* and in *The Washington Post*. Nonetheless, that "splash" happened, and then it went away.

The best long-term way to disseminate reports is to develop a relationship with someone. I was talking last night with a congressional fellow. She said she had contacted Ed Zigler because she had found out that she could get $5 million for child care and wanted to know the most pressing issue that the money could be used towards. Ed, being rather policy-savvy, would give her the answer. Developing these kinds of relationships is probably the best way of having a long-term impact.

A big issue that the question raised is federal versus local. With devolution, so much is happening at the local level. This is a tougher issue because the legislatures function differently. One just has to feel as they go because, regrettably, there is no right way to do this.

Erin Oldham: I would like to give an example of something we have done in Maine. It may be easier because we are smaller and everyone knows everybody else. There are a number of local grassroots groups, specifically there are some in child care, that are well-organized. However, they do not have any research access and are moving forward with or without the benefit of research findings.

At my school, we join up with local groups to offer our research support, which is just one way we have made a connection. There are organized groups out there that have no research connections. A good place to start may be to find out who is in your community and who is already organized and moving in policy directions. They may not know the latest research or have access to it.

Lynn Robertson: We are just designing our evaluation, and I am concerned with accountability and what kind of information has an impact. The most quoted and powerful piece of information in Canada seems to be that for every $1 we have invested in Head Start, we eventually save $7.16. People can identify with this in terms of thinking that a program is worthwhile.

We want to know that the program has an impact in our communities. We are trying to design and find instruments that are culturally relevant and not just measuring I.Q.s. This is relevant in terms of what kind of information is going to help with changing policy, expanding the program, and letting the public know that its investment is worthwhile. It is not a matter of dissemination, but rather a matter of what is the most powerful rhetoric that can be used to get out information.

Also, we feel a big responsibility when it comes to accountability in terms of parents that are placing their children in this program. We are accountable to them and need to show them that there is an impact.

Sherrod: One has to take the lead. To some extent, the kind of cost-benefit analysis you referred to is, in many ways, the easiest to do. It is far cheaper to educate a child than to put him or her in prison for the rest of his or her life, for example. Sometimes that kind of argument works, and sometimes it does not.

However, we cannot just give people what we think they want to hear or what we think will work. I worry that policy makers are too interested in quick, easy, and cheap solutions to social problems. We have to keep coming back with unique kinds of continuous involvement. One needs to think in terms of steps, not in terms of one-shot inoculations.

I still remember vividly when I came to the foundation 10 years ago. I went to a funders' briefing by Public-Private Ventures, which is a research policy organization in Philadelphia. They had then implemented a program called STEP, Summer Training and Education Program, which was based on the idea that poor children, relative to more affluent children, lose academic ground during the summer. When this happens across repeated summers, poor children get progressively further behind more affluent children. They put a 6-week program in place that costs about $1,500 per child during the summer to keep the poor children from falling behind. After the first summer, they had big statistical effects. They found the same kind of effects in the second summer. Then, they discontinued the program and did a 3-year follow-up, finding that the effects had gone away. They were concerned about how this would be explained.

Having come from research, I was shocked to see that they expected a 6-week, $1,500 a person program to turn around the lives of these poor and highly disadvantaged children. We have to get rid of that kind of thinking in this field. It does not work.

Some children need sustained, long-term involvement. An area of research that does not get enough attention is the cumulative impact of programs across an individual's life course. My guess is that the same children who go to Head Start, end up going into youth development programs. Does participating in both generate more of a lifetime impact than if a child is only in Head Start or only in a youth development program? One has to lead the way in terms of what one thinks is the most important message.

Larry Aber: We have been doing opinion polling and focus groups and other types of communications research to try to understand what Americans think about poor children and poverty. We are trying to craft messages that are not only based on the evidence of what is effective for children and family, but that are also based on evidence about what are effective modes of communicating.

There are a variety of reasons to think that that is a testable hypothesis. There are people in the marketing world and in the political world who take messages, compare the effectiveness of different ways of framing arguments and stories, and test their effects on people's receptivity.

People have to sell programs. People cannot just demonstrate whether or not they work. Effective ways have to be found for convincing people to make the investments. We are trying to do that kind of communications research and then test the ability of having a series of messages delivered that change the public's mind or an opinion leader's mind such that they change investments.

There are a lot of cognitive heuristics that go into how people process messages and subliminal messages about children. Rigorous research, including communications research on the effects of different types of messages, needs to be added to our research base because it will improve the policy impact.

Sherrod: You added an important element, which is the communications research aspect.

DeLeon: One of the most influential groups is the parents of those who are impacted. It is one's responsibility to work with this group and ask them where they want to go.

Theresa Hawley: I have a unique perspective on this because I actually work for a program. The Ounce of Prevention Fund has a research division, but we are basically a Head Start and Early Head Start grantee. My budget comes from the budget of the program, so I am constantly in the position of selling myself as being useful to the program.

It does not work to tell programs that if they do not do this research, somewhere down the line someone is going to take it away because they have not proven that their program is effective. They know that there is a lot more to it than that and that if they march on Capitol Hill, they will keep their money.

We are in a different position, having to sell the valid uses of research to the program. With regard to program improvement funds, if one starts working with programs to see research as a program improvement strategy and sells it as that, then they become much more interested in it. The hard part is that one has to actually become useful to program improvement.

We have started using theories of change models, and we are trying to bring it out across the State of Illinois with our state board of education programs. We are going into the programs, sitting down with them, and asking them what their outcome goals for children in the program are. We also ask them what they want children and families to look like 5 years after they leave the program and which program strategies they are using that are most likely to lead to that outcome.

It is amazing how these questions help people focus their program development efforts. Then, one says that the next step is to check and see if the programs are actually doing what they said they are doing. That is the process evaluation. We ask if the programs are having the effect they intended, if the children look like they want them to look by the time they leave the program. If they do not look right, we ask what is going to be done to change that. That puts a different spin on the way that research happens in the program.

Are we having the outcomes we hoped to have, at least by the time the children leave our program? If we can document that this is happening, we have been accountable and have the necessary information to say that the children are successful when they come out of this program. We also have the information to say that the target is not being reached, and we know why and think we can make a difference.

We can look not only at where we are having the effect we intended, but also at where we are absolutely not having the effect we intended. Then we can change our program and improve it to make it work.

My purpose in saying this is that these partnerships between researchers and the community are important. However, one should not approach it with just a message of proving that what we are doing is effective so that we can get more resources for the program or address the issues of the policy people. Rather, research should be done within the context of their lives. The goal is to improve the program and to make the program work the best way.

Joanna Weaver: Accountability is attained through outcomes measures, which were called behavioral objectives 30 years ago. However, United Way and other foundations that support our Head Start programs want even more than what ROMA, the Results-Oriented Management Accountability, asks for. The county has implemented ROMA, but people have been insufficiently trained on it, and yet they are expected to be accountable with measures, numbers, and percentages.

The issue of return on investment for Head Start has been difficult. I have thought a lot about this and talked to other agencies that are getting United Way funding, trying to come up with a method of defining and measuring that as well as a means of comparison. The United Way boards do not even know how to do it. Thus, I question if they know what they are hearing and looking at and why.

One needs to know to whom one is talking to when one does communicate. When I talk to my county commissioners, I know which way to go with them. When I talk to United Way, I usually know which way to go with them. If I talk to university people, it might be different. It does not mean a different story is being told, but rather a different approach is being taken depending on what the audience is most interested in.

I told United Way that Head Start is comprehensive. I asked them if they wanted me to come up with a figure that says how much money they would save if one parent remained on welfare versus another parent now working with a Head Start program while we are helping and supporting them in their employment.

Now, how about immunizations and nutrition? What should I compare that with? Should an immunized child in Head Start be compared to a child who is not immunized? What national figure or resource do I go to for that? I am trying to figure out how to deal with the funding groups that require this.

On the federal level, is Head Start looking at ROMA as a research tool? Are they going to look at outcomes in a way that could be used in all the local programs? Will Head Start people be trained at different conferences on how to do that? Where are we going with this outcome research and will it ever really be a part of research?

Sherrod: This is something that worries me a lot. A number of people have argued that with all the new philanthropists on the scene, such as Gates, Soros, and Annenberg, who are all into concepts such as return on investment and venture capital, the nature of philanthropy is going to change, and it is going to move more in this direction. This means that in the kinds of programs that they fund, they are going to push accountability.

It worries me because I am not sure that the arenas we work in are amenable to these kinds of capitalist concepts. In fact, at one time, I thought about whether or not there was some way that one could bring a Marxist perspective into thinking about this that would orient one in completely different directions than venture capital and return on investments.

My gut reaction is that it is "wrong-headed." We need to push against it to the extent possible, but I am not sure how to do that and what the alternative is.

DeLeon: Head Start seems to set an unrealistic standard for itself. I do not care whether in 5 years one can show that a program had an impact on an individual child. If one has a reasonable program given the information at this point in time and is trying to do something, then the person is doing what he or she gets paid to do while making changes over time.

It seems that Head Start is more caught up in whether or not the program is working over 5 years than in the enthusiasm that is happening at this point in time. I do not see that in a lot of other programs. No one ever says that if we get children access to dental care, we should then turn the clock ahead to when they are 22 and see if their teeth are better or not. In reality, people try to get dental care even though they know that they may lose their teeth at some point anyway. I do not understand why, to some extent, Head Start is locked into accountability way beyond any other program.

Head Start ought to just focus on what is being done well and enjoy it. This includes outreach to parents, who are impacted, and outreach to service providers, such as optometrists, who can volunteer their time. If this is done, then there is enthusiasm and people say the program is good although it could always be improved.

Weaver: I absolutely support what you are saying because that is exactly how we get the dentists, the pediatricians, and everybody else to come into our program and work with the children. I am talking about a system that exists within United Way that is supported by 500 volunteers. It is not just Head Start. It is every program that is a United Way funded program. We are dealing with an existing system that people strongly believe in and that is supported both by United Way as well as the county commissioners.

I work with a small rural program in which volunteers have a major impact. However, if I only had the volunteers, we would not be making it. I must also get money to pay some people for their services, but we are so underfunded. I am really talking about a system versus the "one-on-one," get each person in, and still build up support in the community.

DeLeon: Heading up Head Start programs, people have to keep aligning themselves with other organizations because otherwise they will be locked into asking if it is cost-effective at all rather than asking about how cost-effective it is. If one aligns with podiatrists or dentists, then the question becomes quantitatively different. The question becomes how to make it more effective rather than whether it is effective.

The key is to get people involved in doing what makes the most sense. How does one get graduate students doing something? It is much better to do something than to sit around and have nothing to do. For Head Start, this should be the driving force.

Head Start, as a system, ought to be a high priority of the Senate World Caucus. Rural America is a whole other agenda. It is not going to be a high priority until somebody in rural America makes it a high priority. In rural America, the statistics on the elderly, diabetes, depression, and the lack of resources are off the map. Computers are now becoming more available.

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These are examples of the uniqueness of rural America, which the Centers for Disease Control could suddenly target if the Congressional will was there and if the local will was there.

Sherrod: I work more with adolescents and youth than with young children. In the youth development field in recent years, there has been a movement from an orientation toward fixing problems, such as preventing teen pregnancy, high-risk sexual behavior, substance abuse, and school dropout, to an approach that is oriented toward promoting positive development.

It began with the idea that all teenagers need certain kinds of things. The way teens differ from each other is not in individual characteristics that make some more at risk than others, but in the extent to which their needs are met through naturally occurring resources in the form of family and school. That promotes a different orientation to a policy of providing resources that meet children's needs rather than fixing individual-level problems.

One should be able to justify a program such as Head Start on the basis that it improves the quality of those children's lives for the years that they are in the program. Their bellies are fuller, they have positive social interactions, and so forth. If it does that, it is worth the small social investment we put into it, even if it does not put them on a lifelong trajectory of success.

Our goal should be to accumulate, across the life of the individual, more of those kinds of experiences that improve the quality of their well-being. If this is done, one will end up with more successful individuals who cost society less.

How do we get to that orientation, particularly in this context of return on investment? I do not know, but that is where we need to go.

Lois-ellin Datta: I have had the privilege of working with both Project Head Start nationally and locally with United Way, and I understand that agencies at the local level need more money. The United Way and the local sources are crucial. In part, as a result of the way Congress and others have framed what is important in GEPRA, the Government Performance and Results Act, which has cascaded down to the United Way, we are a long way from being able to do what you would like us to do on the local level.

I agree with everything that has been said about what ought to be done at the local level, such as connecting with decision makers, Congress, and, if I could, the President before they are elected. Maybe we need a partnership. Maybe we need help from the foundations in modeling what is found as credible evaluations and documentation and getting the word out. Maybe we need help from Congress so that the legislation requiring evaluation does not always come down as randomized experiments, although I have nothing against them, or as a requirement for better evidence that Head Start works when the same questions are not asked about tax expenditures, for example.

There may be an opportunity to work together to suggest model legislation or model ways of phrasing the evaluative and research requirements for human service programs. Perhaps there are ways that we can accumulate knowledge at the local level. Then the Head Starts and the human services groups that are working in this vast social experiment can learn about each other's research and evaluation and share with each other how problems are being solved. There are some good solutions happening locally.

Larry Schweinhart: It is valuable to back far away from the context we put ourselves in and think about the fact that most public policy is taken for granted everywhere except at the margins. Nobody in here questions the idea that we are going to fund K-12 education every year. That includes kindergarten. It is interesting to compare kindergarten to Head Start because kindergarten got where it was without the help of any research whatsoever.

We are moving in that same direction with early childhood programs as clearly we spend more money on them every year. Now, the question is how can people be persuaded to go from one idea that nothing is spent on early childhood programs to the idea that as much money as it takes should be spent on early childhood programs. However, we are moving from one "taken-for-grantedness" to the other "taken-for-grantedness."

Head Start in Washington has a remarkable political truth. They have a local congresswoman who has two busts of FDR in her office. This makes her unusual, to say the least. I was in town once to talk and to do some of the things that the Head Start Bureau does all the time, which is to try to deal with the quality of the program. I told the congresswoman the reason why I was in town, and she was quite surprised because she knew that Head Start works.

There is a policy truth here. We were talking about how to get our message out. Well, we have gotten a simple message out. In fact, if one looks at the increase in funding for Head Start, it has been steady. It has not gotten up to full funding yet, but it has been steadily increasing through several administrations. Republicans and Democrats both support it.

A comment was made a while ago that I wanted to take issue with because it makes a point that I wanted to make, and that is that Head Start is accountable. It is, and it is not. Talking about return on investment and long-term benefits confuses us. Maybe, instead, we should make the distinction between evaluating local programs, which is in the works, and evaluative research.

As far as evaluative research goes, limits ought to be tested to see how many lives can be affected. There is no reason not to do that. As far as evaluation goes, Head Start should be more focused on outcomes. What has passed as evaluation in Head Start programs has been an exclusive focus on process through program monitoring.

In other words, we make sure everything is in place, but we do not make sure that it has any effect on children. What we are moving towards is asking that question of whether or not these programs have effects on children. A way to characterize the problem we have had with evaluative research is that we have overgeneralized it. We have no idea if Head Start programs work. Some of them work well; some of them work poorly. However, we do not know how any good Head Start program works.

We do not have a clear idea of what constitutes effectiveness in local Head Start programs. We are moving towards that, which will give us a much better focus on accountability than we have had in the past. Thus far, we have been accountable for making sure that we follow the rules, but not being accountable for making sure they really affect children.

Sherrod: Having an entitlement does not mean that one is on "Easy Street." Welfare reform demonstrated that entitlements could be taken away just as easily as they could be given. However, you raised an important issue about replication and going to scale.

Years ago, when the Clinton Administration proposed to dramatically increase funding for Head Start, the issue was not whether or not Head Start works, but how to go to scale and maintain quality and how to improve the quality across the different centers. That is an implementation issue, not an accountability issue. One of the things that gets in the way of program expansion, which we do not know a lot about, is going to scale and replicating things.

Comment: There is just one other thing I wanted to say. Everybody thinks the Potomac is the center of the world. You said it was not, and you are absolutely right. K-12 education is funded primarily out of state and local government, and nobody is questioning getting rid of those. Early childhood programs are somewhat at risk because they are so centrally funded here in Washington.

Disseminating Early Childhood Research to Local and State Decision Makers

CHAIR: Sheila A. Smith
DISCUSSANTS: Tammy Pust, Carol H. Ripple
PRESENTERS: Sheila A. Smith, Amy Susman-Stillman, James Mensing, Alice Bussiere

In the present era of devolution, authority for designing programs and policies is shifting from the federal to the state and local levels, increasing the need to develop effective local models for research dissemination. The Forum on Children and Families at New York University, the University of Minnesota's Children, Youth, and Family Consortium, and the California Children's Forum were presented as models of research dissemination. Policy makers, researchers, advocates, and community-based organizations engaged in a discussion on initiating and developing effective early childhood research dissemination mechanisms to inform local and state policies and programs.

■ The Forum on Children and Families at New York University: Disseminating Research to Improve Conditions for Children at the City Level

Sheila A. Smith, LaRue Allen

The Forum on Children and Families is a project of the Child and Family Policy Center at NYU, and is one of the chief ways that the Center tries to bring important findings from early childhood research to the attention of local and state audiences in New York. The Forum's main methods include a regular series of meetings, dissemination of issue briefs based on these, and ongoing outreach to extend the impact of major meetings.

Let me start by saying something about our rationale for developing the Forum. I know I do not need to convince anyone here that there is value in promoting the use of sound, research-based knowledge in the design of policies and practices that affect young children and families. But what is striking is that there has been an imbalance in how our research dissemination efforts have been targeted. In the last decade or so, there have been many well-organized, sustained efforts to target decision-makers on Capital Hill and nationally. But relatively few research dissemination efforts have convened city and state decision-makers and individuals involved in program implementation and direct service delivery, to bring them important research and analyses in a setting close to where they do their work. I think this is changing, with the projects we will talk about, and also efforts like the state-level Family Impact Seminars.

The Forum on Children and Families has held 7 major meetings in the past 2 years. Our substantive focus has been—and will continue to be—on supports for the health and development of young children (0 to 8) in home, school, and community settings. Our geographic focus is mainly New York City—that is, we encourage discussion of how to improve conditions for young children in New York City because we think there are unique opportunities in targeting a local audience. But we also include state government officials and other leaders, given the importance of state policy to New York City. Some of our most engaged participants work at the state level, in part because the research we present has relevance to their broader policy work.

We tailor our list of participants to each meeting's topic, but typically include senior administrators in city and state agencies, program directors, and practitioners who work directly with children and families. We also invite foundation representatives, local researchers other than our main speakers, and other leaders involved in child and family policy, as well as some elected officials and their staff, such as analysts from Borough Presidents' offices and state legislators' staff.

Our Forum meetings are designed with two goals in mind. First, we want the meetings to provide research-based information that participants might be able to use in their every day work—whether this is implementing, monitoring, or working to improve programs and other supports for children, or working to achieve change in policy, or even, in the case of local researchers, working to generate new information that can strengthen programs and policies. Second, we want to use the Forum as a stimulus to new longer-term partnership initiatives that could strengthen supports for the city's children.

Our meetings have been half-day events, with a working lunch, which seem to fit into the schedules of even our state-level participants who travel from Albany. Typically, about 70 to 90 people attend a meeting. We always have one or two leading researchers provide a synthesis of research related to the meeting's topic at the start of the meeting, and we work with the speakers ahead of time to help them develop a presentation that is accessible to our mostly non-researcher audience. As we develop a meeting, we also talk to our advisors and other key participants about current policy and program initiatives, and we share questions they raise with our research speakers so that their presentations address some of these. We also use these ongoing contacts with participants to identify the people who attend a particular meeting in order to better understand opportunities for follow-up after the meeting.

We usually have one or more speakers who are involved in policy and program development related to the topic respond to the research presentation and offer their ideas about opportunities for improving supports for children in the areas we are focused on. Then we reserve time for discussion of next steps. During that time, we encourage participants to generate ideas for partnership efforts that might involve, for example, efforts to develop new ways to monitor program quality, or design joint training opportunities—the kinds of initiatives that could strengthen the local infrastructure's capacity to promote program quality and children's access to services. Other kinds of partnership efforts might also help local agencies and researchers collect information that can inform policies and programs over time, or change policies that affect resources available for services or quality improvement efforts.

We get a lot of feedback on the Forum, and it comes to us in different ways. After each Forum we conduct structured interviews with a sample of participants and ask them whether and how they used information provided at the Forum, how the session could have been improved, their ideas for follow-up, and their suggestions for topics we should cover in future meetings.

It is clear from these interviews that many participants are using the research and research-based recommendations in a variety of ways. Here are a few examples, just to give you a sense of what we capture in our evaluation interviews: (a) A Head Start Education director used research on early literacy and research-based practitioner resources the Forum presented in improving the year's lesson plans for her program, (b) An analyst at a Borough President's office used research findings identifying characteristics of high quality after-school programs for young children in making awards to support after-school programs, and (c) A researcher changed an interview in a current study following our meeting on welfare reform and children, so that her data would better capture information about children's access to health coverage across families that differ in their work/welfare status.

Another goal of the Forum is to stimulate long-term partnership initiatives, and we have had some success doing that. One partnership initiative that built on two Forum meetings is a project that the Center is working on with the City agencies administering Head Start, child care, and universal pre kindergarten, to strengthen supports for young children's literacy development. In this project, we are using a common set of program assessment and training methods in classrooms across these three programs, and at the agency level. We have plans to train supervisory and program development staff in these methods to build capacity for quality

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improvement, again, across these three programs. It has been much harder to encourage others to take the lead in partnership initiatives. Right now we are working on increasing our own capacity to respond flexibly to opportunities to develop partnership initiatives, which means seeking general support funding to enable us to quickly respond (example of work on program assessment).

I want to offer a few other reflections on strategies for promoting the use of early childhood research in program and policy development at the local level, drawn from our experience with Forum activities.

We have been told by participants that one of the most valuable functions of the Forum is the chance to interact with leaders across the three early childhood sectors in NYC—child care, prekindergarten, and Head Start programs. In NYC, as elsewhere in the country, there is an increasing blending of these programs at the community level: programs share space, funding, staff, and in some cases are fully integrated, even programmatically. Whenever we have a meeting that relates to program quality, we include a mix of individuals from these sectors, and our Best Practices in Early Literacy Project attests to the value of the Forum as a stimulus for very concrete efforts to develop cross-sector quality improvement initiatives. We also involve administrators from the city agency involved in welfare reform as a means of promoting awareness of early childhood program quality in an agency that has, until recently, not adequately informed families leaving welfare of opportunities to enroll children in formal early childhood programs.

For those of you who may be considering a Forum series like ours, I wanted to suggest some guidelines in thinking about how to select issues and topics. In some cases the topic arises directly from requests by our audience, but I would have to say that most of our topics have been generated internally first, and then we test out the idea as we begin to develop the meeting. This is partly due to the very general responses we get when we formally ask Forum participants for ideas. For example, participants want to know how to improve early childhood program quality, and we have to then take that idea and try to find different entry points into this topic. In this case, we developed three meetings concerned with program improvement methods—one on methods for assessing program quality, one on improving home-based supports for early literacy, and a third on strengthening parent involvement more generally. We also look for opportunities to present new syntheses of research, or new applied research of special value to our audience. For example, findings and recommendations from the National Research Council's Report on preventing young children's reading difficulties and its accompanying practitioner report, was a centerpiece of one Forum meeting. In this way, a local research dissemination project can really extend the impact of high-level research syntheses, bringing them to audiences that might otherwise fail to discover them or pay much attention to them. Yet another kind of topic is one we call the neglected issue topic. Our meeting on strategies for improving family child care is an example. In this case, it was clear to us that very little attention, especially in NYC government agencies, was focused on opportunities to improve the quality of this form of care, despite rising numbers of children using it, including children in some Early Head Start programs and many more in families moving from welfare to work. Finally, our first meeting focused on a topic related to the implementation of a new program—in that case, the state and the city were looking at how to ensure the success of the fairly new Child Health Block grant. Using these different criteria—topics that are explicitly requested by participants, topics that capitalize on the availability of new research, topics that reflect neglected issues, and topics related to new policy initiatives—we have received very positive feedback on the timeliness and relevance of the issues we address.

I want to end with some comments on the appropriate goals for local-level research dissemination efforts like the Forum. I think its important to recognize that the kind of results one can work to achieve and document when targeting local audiences are often results that show individuals involved in shaping programs and policies becoming better connected to new sources of research-based knowledge. This might take the form of using information provided directly by the Forum or its follow-up issue brief, or using a source identified by the Forum in their work. It might also involve direct work with researchers on policy and program initiatives that show some promise of leading to improvements in supports for young children. These are quite different from the impacts that can sometimes be documented at the state and federal levels, when large new policy initiatives might be influenced by research. I would argue that the kinds of changes in program implementer's access to sound knowledge about conditions that benefit young children's development is just as important as impacts related to immediately visible policy change. As you know, the value of any policy lies, in large part, in its implementation over time at the local level.

■ A University-Community Model for Connecting Research, Practice and Policy

Amy Susman-Stillman, Wendi Schirvar

This paper describes the policy education initiative formulated and implemented by the Children, Youth and Family Consortium (CYFC) at the University of Minnesota. The goal of the policy,education initiative is to help policymakers at all levels create and develop sound public policy that is well-grounded in research and theory. The CYFC serves as a bridge and connector of departments across the University and in the community. The policy education initiative was designed to creatively connect the resources of the University to state and local policymakers in the area of early childhood.

Keeping true to our mission and mode of functioning, we concentrated on connecting within the University and in the community. We facilitated connections with a strong intercollegiate infrastructure of centers and departments conducting work in early childhood. We built a strong community presence, working with many early childhood groups. We also formalized our relationship with the state department of education, called the Department of Children, Families, and Learning (DCFL). We arranged for and helped subsidize one of their assistant commissioners to serve as a liaison to the Consortium on Child and Family Policy Issues at the state level. Since a great deal of policy development and implementation occurs at the state department level, we viewed this as an ideal way to link University resources to DCFL, other state agencies, and state legislators and policymakers.

Our reactive work occurs mainly during the legislative session, when we have a field policy educator at the legislature seeking opportunities to provide research information and work with legislators and their staff.

Our proactive work takes place year round, and includes hosting joint policy forums, supporting University-wide efforts at generating policy-relevant information, working with the Consortium Advisory Council, and developing a section of our website focusing on policy education.

As we've been engaged in this policy education initiative over the last year and a half, we've come to face some ongoing challenges, namely striking a balance between being reactive and proactive; maintaining an appropriate role for the University in the policy world (presenting our work as educational rather than lobbying); building relationships with key policymakers and staff; and balancing the varied interests of partners in this work.

We feel quite positive about this collaborative model of disseminating policy-relevant information to state and local policymakers. Our efforts are beginning to yield fruit, as the Consortium is recognized as a conduit to the University and a reliable source of information. We look forward to continued work with the hope that our state can meet the needs of our youngest and most vulnerable citizens and their families.

Children and Families Forum: News, Policy Dialogue, and Research Updates on the Web—A New Tool for Dissemination and Policy Engagement

James Mensing, Alice Bussiere, Bruce Fuller

Decisions about how to implement welfare reform and provide child care assistance to mothers who are now required to work are increasingly devolving to local actors in a process commonly referred to as decentralization. Meanwhile, important policy decisions continue to be made by county, state, and national government officials. This process is rapidly evolving as new approaches are proposed, implemented, and sometimes discarded or adjusted. Timely, high quality research on what is happening, and why, is critical to the success of the overall welfare reform effort. Simultaneously, reform efforts must inform the research if it is to be useful. Unfortunately, communication between local actors, policy makers, and researchers is haphazard at best, and frequently nonexistent. To remedy this problem, we are creating a new dissemination and research tool, The Children and Families Forum. Its features include an interactive website and a series of focused, in-person conferences. The aim is to provide those working on welfare reform and child care with a single venue to exchange information, critique and interpret that information, and propose new policy initiatives and research projects.

As part of the academic community's response to this changing environment, the University of California, Berkeley—Policy Analysis for California Education (PACE)—and Yale University have embarked on the Growing Up In Poverty (GUP) Project. This is a 3-year national study of 948 welfare mothers. The aim is to determine how children and their mothers are faring under welfare reform, what resources are being made available to them, and what struggles they face in trying to balance work and family responsibilities. The Child Care Law Center (CCLC), San Francisco, has also engaged the topic of welfare reform and its effect on children.

We are currently in the process of creating a prototype of the website described above and have identified several content goals: providing a single point of access with links to other outlets; organizing information by topic and audience in order to build a proactive system; making the site reasonably time sensitive, especially to legislative and court action; layering the information from simple sound bites or press releases to more in-depth coverage, and; using a triangular model that incorporates and draws connections between policy, research, and practice.

The Child Care Law Center has organized in-person efforts to reach advocates concerned with child care issues. One such event was a panel discussion at the National Legal Aid and Defenders Association meeting in Long Beach, California in November 1999. Another event was a 1-day seminar held in Fresno, California that was geared towards groups working with poor and migrant populations. Participants were informed about local child care needs, and given an overview of the child care system, licensing requirements, and funding streams.

In February 2000 the Berkeley-Yale team released the Wave 1 results. The report, *Remember the Children: Mothers Balance Work and Child Care Under Welfare Reform,* has received widespread attention in policy circles, among advocates, and in the press. We are now clarifying lessons learned from this first round of dissemination.

Very Early Development

Parent-Child Relationships: Cutting-Edge Research on Attachment and Communication in Parent-Child Interaction

CHAIR/DISCUSSANT: Kathryn Barnard
PRESENTERS: Glenn Cooper, Robert Marvin, Barbara Alexander Pan, Eduardo J. Armijo

Robert Marvin: Today, we would like to briefly present an outline of the project that we are involved in, a partnership between the University of Virginia, Marycliff Institute in Spokane, Washington, and the Spokane Head Start system. The long-term goal of this project is to apply attachment procedures and the constructs of attachment research and procedures to actual clinical settings and clinical questions. This brings the whole field of attachment full circle to where it started with Bowlby and Ainsworth. This is a 3-year project. We have just completed data collection on Year 2, but the data have not yet been coded and analyzed, so we will be talking only about the Year 1 data.

In many ways, the project is conceptually and operationally based on Ainsworth's dyadic notion of the child's use of the caregiver as a secure base for exploration. This is what we call the "Circle of Security," where the child moves away from his or her secure base to explore while the caregiver watches, monitors, helps as needed, and enjoys the interaction or the child's play. When the child is distressed, the availability of the attachment figure is a haven of safety for the child.

Another basic idea of the project is to do assessments of the dyad. We classify the child's attachment to the parent using available systems, as well as a new system that we developed in my laboratory. We now have a parent classification system, which complements the infant and child classifications. For the purposes of this presentation, the two major groupings of attachment classifications are important. First, the ordered classifications, also known as the ABC classifications, are the secure, avoidant, and ambivalent classifications. The second group is the disordered classifications, which includes disorganized attachments, and, in somewhat older children, the disorganized-controlling and insecure-other classifications. We will focus on ordered versus disordered attachments.

One of the primary goals of the intervention protocol is to increase caregiver sensitivity and responsiveness to the child's signals relevant to moving away from the caregiver to explore and toward the caregiver for comfort and soothing.

A second goal is to increase reflective functioning, the caregiver's ability to reflect on her own and her child's behavior, thoughts, and feelings regarding their attachment caregiving interactions. In a sense, the bottom line is to decrease the proportion of dyads exhibiting disordered attachment caregiving bonds.

Good research—much of it coming out of the Seattle group—has made us aware that in the Head Start population there appears to be a higher than expected proportion of disordered attachments. We will talk about that after Glenn Cooper has finished his part. The full sample that we will work with over the 3-year project will be about 85 dyads, depending on the dropout rate, which has been low so far. The children range in age from 18 months to 3 years at the beginning of the project. In Year 1, the participants were 15 mother-child dyads of 17 who were originally recruited. In Year 2, the participants were 28 dyads of 31 originally recruited, but these data are not coded yet.

The basic design is that first we recruit the dyads. Then, we do a preintervention assessment, a video-based 6-month intervention, an immediate postintervention assessment using the same procedures, and an identical 1-year, postintervention assessment.

The procedures include the Strange Situation, from which we code the child's and the parent's classifications. We also use the Adult Attachment Interview for the parents and a number of behavior checklists. From the classifications and all of these data, we design specific intervention goals for each individual dyad. They participate in the 6-month intervention, and then we do the same assessment immediately afterwards and a year later.

Glen Cooper: I will give you a whirlwind tour of this 20-week group to give a little feel for the process. There are five points that are emphasized. The first is creating a holding environment or a secure base from which the parents can explore their parenting. The second is providing parents with a user-friendly map, the "Circle of Security," to understand attachment theory. The third point is helping the parents develop their observational skills. The fourth point is the process of reflective dialogue. The fifth is supporting parents' empathic shift from defensive process to empathy for their children.

We start developing the holding environment from the first contact. We do this in a variety of ways, including having the Family Services Coordinators be part of the group so we can piggyback on their relationship. We start the groups with what we call a music tape, which is a collection of music vignettes that we put to a song, and we tell the parents, "This is a song that your child is singing to you." When we review the tapes with the parents, we also show our concern, interest, and enthusiasm as we celebrate their commitment and their positive intention in parenting.

The "Circle of Security" is a user-friendly map that we developed to teach attachment theory to parents. We explain it by telling them that when the child feels safe and secure and has what they need, they are free to explore. Their exploration system or innate curiosity kicks in, and they need support for that exploration. As they are exploring, sometimes they just need the parent to watch over them, help them, or enjoy them. When they have been out long enough that they need to check in, if they get tired or anxious, or if they get into a dangerous situation, they need the parent to provide comfort and protection or to help them organize their feelings. We focus on helping parents develop their observational skills, because, for a lot of our parents, this idea that children need help organizing themselves internally, as well as help organizing the external environment, is new information.

This is how it is supposed to work, but sometimes parents get caught in a limited "Circle of Security." For example, some parents are uncomfortable with separation because it stirs up memories and feelings from their own history. They communicate this discomfort in either subtle or not-so-subtle ways, and the child begins to get uncomfortable. In this case, the child says, "I need you to support my exploration, but that makes us uncomfortable, so I miscue you about my need, and I act like I need comfort and/or protection." This is the preoccupied-ambivalence dyad.

Sometimes it is not the separation, but rather the closeness that makes the parent uncomfortable. In this case, the child says, "I need you to comfort and protect me and help me organize my feelings, but that makes us so uncomfortable that I miscue you about my need, and I act like I need to explore and be distant." This is the dismissing-avoidant dyad.

We make it clear to parents that everyone is more comfortable on one side of the circle than the other. All of us sometimes complete the whole circle, and all of us get caught in one or both of these little loops. However, the more we know about our interactions with children, the more we can spend time completing the entire circle. To facilitate this process, we help parents develop their skills in observing parent-child interaction.

We do not learn from our experience; we learn from reflecting on our experience. One way that we learn to reflect on our experience is through reflective dialogue. When we first engage the parents in reflecting on their experiences with their children, it is not unusual for them to reply, "Nobody's ever asked me that before." As the group continues, we see that they begin to increase their capacity for reflective functioning.

As the holding environment develops and the parents get some experience using the "Circle of Security" as a map and enter into reflective dialogue, we see a shift from a defensive process to more empathy for their children. For example, a mother's sense that her niece, who she has adopted, is glaring at her gives us a glimpse of the internal representation that she is projecting onto this child. In this piece of tape, we hear her in the final group session talking about what she has learned. Listen for the shift in her internal representation.

Voice on Soundtrack: It was a shock when I first saw my daughter. That is a new thing for me to call her my daughter—something I started here. Seeing my daughter on camera, in so much pain, it was like how much pain that kid was in. She was like 12 or 13 months—she was just a little baby, and that killed me. I knew a little bit before I came into this group that there was something off about her not wanting to be held. I always felt like she did not like me, and that it was something with me.

But I can read her cues, and I can feel—not feel what she means, but by looking at her I can tell what she wants me to do or what she needs. Like her arching, I know, is her miscue, and I understand that more. She has done so much better with that. We were outside when our neighbor came over and was talking to her, and I felt her look up at me and then put her head down. I knew what she wanted. So I moved in closer and put my hand on her. I would not have been able to read her cue before and then comfort her. Before, I just felt rejected by her. I can't believe I am saying this, I feel so dumb, but I felt rejected by her, like she did not like me, and it just set our relationship back, even though I loved her. She wouldn't have grown up healthy that way.

Marvin: Again, these are only Year 1 data, so it is a small sample. The important thing to look at is the change in the caregivers' behavior patterns in the Strange Situation. Before the intervention, the proportion of disordered caregiver attachments was 60%, which is high. Postintervention, the proportion of disordered attachments was down to 10-15%, which interestingly, is essentially the same rate found in a low-risk population. There was an increase in ordered attachments with 40% of caregivers being classified as having ordered attachments in the preintervention assessments and 87% being classified as such in postintervention assessments.

Similarly, about 53% of children were classified as having disordered attachments during preintervention assessments, while approximately 20% were classified as such in postintervention assessments. With the qualification of this being such a small sample size, so far, the intervention has had quite an impact.

In terms of discussion comments, obviously, we are quite pleased with the apparent effect this is having on attachment caregiving relationships. One of the most exciting things about this particular protocol is the fact that it is individualized for each dyad. This is not a one-size-fits-all sort of intervention. We actually go in and carefully do an assessment of the dyad to find out what their dyadic pattern is. Although everyone goes through the same video-based intervention, we individualize the specifics of the intervention for each dyad. We are awaiting results of Year 2 at this point, and we are about to start Year 3 in the fall.

Kathryn Barnard: As part of the National Evaluation of Early Head Start, Barbara Pan and

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colleagues are conducting a 5-year longitudinal study of language and socioemotional development of infants and toddlers in 143 low-income families.

Barbara Pan: This is a collaborative effort with Meredith Rowe, Catherine Ayoub, and our extended research family of graduate students, program partners, and participating families. The focus of our Early Head Start local research is children's language and socioemotional development. Our theoretical approach is social interactionist. Thus, we are looking at children's development in the context of their interactions with the adults around them, particularly their parents.

We are working with a sample of 146 families living in southern Vermont. Most are White and live in relatively rural settings. In earlier reported work, we found a wide variation in parents' communicative behaviors, both verbal and nonverbal. We also hypothesize that parents' childrearing goals and affect influence the quantity and quality of their communication with their children and that the child's characteristic communicative style also influences the dyad style that develops.

We are particularly interested in communicative development because extensive research, mostly with middle-class families, shows that the quantity and quality of adult-child communication predicts child vocabulary and rate of vocabulary growth. Those, in turn, are strong predictors of children's academic success.

Our research questions were: (a) How do mothers' parenting goals, affect, and communicative style play themselves out in interaction with their young children? and (b) As children become more communicative themselves, what do they contribute to the interactional style of the dyad?

At baseline, we interviewed all of the mothers about their children's language development and about their own communicative behavior with their children. Then we conducted in-depth interviews with a subset of mothers about their childrearing goals and beliefs, and their own history of being parented. When the children were 14, 24, and 36 months old, we videotaped mothers and children interacting around a book and with toys. We also asked the mothers to complete a checklist, a MacArthur Communicative Development Inventory, about words that they judge their children to understand and to produce. At 14 months, we also asked about gestures that their child used.

Two mothers from our sample who participated in case studies were assigned the pseudonyms Joyce and Carolyn. Both of these mothers were randomly assigned to the comparison group in the National Evaluation study. Therefore, they did not receive Early Head Start services, although they were eligible for services at the time they entered the study. We chose these two mothers because they had relatively low levels of parenting stress at baseline and because neither was at the extremes of the distribution in terms of communicativeness. When the children were 14 months old, Joyce was at about the 25th percentile for our sample and Carolyn at about the 75th percentile for our sample in terms of how much they talked and pointed. Interestingly, their relative standing to each other reversed when the children were 24 months old. Both of the children were among our most communicative children at 14 months, both verbally and nonverbally, based on their mothers' reports and on our direct observation. At baseline, Joyce was 40 and had four children. Carolyn was 24 and the mother of two. Both were White and had a high school education.

As we started looking at the quantitative and qualitative data, the self-report and observational data for these two mothers, it became clear to us that the two had somewhat different affective stances toward communication with their children. We believe that the affective stance may have implications not only for children's early communicative experiences and, by extension, their language development, but also potentially for intervention programs working with mothers like Joyce and Carolyn.

We will now focus on the relationship between affect and communication in these dyads. Our first hint that Joyce and Carolyn might have different attitudes toward parent-child communication was when they initially came into the study. We asked all of the mothers whether they talked to their children before the children themselves began to talk, and if so, why they did so. Both Joyce and Carolyn, and in fact all 146 of our mothers, said that they did talk frequently to their children before the children themselves began to talk. We categorized the mothers' reasons into three groups. The first group consisted of affective reasons. The second group consisted of pedagogical or cognitive related reasons. The third group was used when mothers gave both kinds of reasons.

Joyce was an example of a mother who gave an affective reason. She said she talked to her children before they started talking themselves "because they like it." Some mothers said, "Because I like it." Carolyn, on the other hand, said that she talked to her daughter "because she needs to be talked to."

Since both Joyce and Carolyn participated in our embedded qualitative study, they were interviewed three or four times over the course of the first year of the study by a graduate student. These were open-ended interviews that focused on mothers' childrearing beliefs. In these interviews, Joyce emphasized that she relied on instinct in childrearing. One of her main goals as a parent was to have fun with her children. Carolyn, on the other hand, talked about wanting to let her child set the agenda whenever possible. She talked about how others perceived her as having a "laid-back" parenting style.

Our next question was how these somewhat different parenting and childrearing goals seemed to play out in the mothers' communicative and affective interaction with their children. Therefore, we transcribed the 10-minute videotaped interactions that occurred around a book and toys when the children were 14, 24, and 36 months old. We are doing that for our whole sample. From these transcripts, we are able to look at things like the quantity and variety of speech that individual mothers and children produce, the frequency of nonverbal communicative behaviors, such as pointing, the degree of conversational burden that each partner bears, and the syntactic complexity of the speech that each produces. In addition, for a subset of families, the videotaped and transcribed interventions have been coded using a detailed coding scheme that looks at multiple aspects of mother and child emotion and affect, such as the mother's and child's affective tone and facial expression, mother's style of engagement with her child, child's rhetoric activity, and so forth.

I now will focus primarily on the mothers, specifically on their affect, their expressed emotion, and four aspects of engagement. Looking at affective facial expression, although her expression was fairly evenly divided between smiling and blank or neutral expression, Joyce, who emphasized her goal of having fun with her children, engaged in considerably more smiling than did Carolyn, who emphasized her goal of letting her child set the agenda. Carolyn's facial expression at all three child ages tended to be blank or flat more often than smiling. At two out of three observations, Joyce expressed more positive emotion than neutral emotion, while the emotion that Carolyn expressed at all three observations was markedly neutral.

For engagement, we looked at four conceptual groups of behaviors: (a) engaging, (b) unengaging, (c) acknowledgements, and (d) pedagogical. Joyce consistently demonstrated a lot of engaging kinds of behaviors, which included attention-directing behaviors, making requests of the child, imitating the child, and so forth. Unengaging behaviors included digressions, references to the mother herself, ignoring the child's overtures or producing neutral comments. Carolyn's engagement with her child, particularly when her daughter was 24 and 36 months, was often in the form of acknowledgement, and some of these were nonverbal acknowledgements. She did seem to be letting her child take the lead and herself taking a somewhat more passive role in the interaction than was the case with Joyce and her daughter. Pedagogical engagement behaviors included verbatim reading of text from a book, querying the child about her world knowledge, explaining the meaning of the word, and explaining how something works.

Turning now to communicative behavior, we found that each mother's level of communicativeness varied somewhat from observation to observation. Joyce was more communicative at the two later observations, although the measurement of her talk when her child was 14 months may have been a bit underestimated on our part. This is because a lot of what she said could not be heard on the tape. She had her child seated in her lap and was whispering into the child's ear. We know there was more talk going on than we could hear, but this is what was reflected in the transcripts.

Carolyn was somewhat more communicative when her child was 14 months old than at the 24- and 36-month observations. If we look at pointing, we see essentially the same pattern. At 24 months and then particularly at 36 months, Carolyn engaged in little pointing as she interacted with her daughter. At all three ages, Carolyn tended to use a more complex verbal style with her child. Even at 14 months, she used longer utterances and more varied vocabulary, whereas Joyce started out at 14 months using shorter sentences and more restrictive vocabulary, and then increased in complexity as her child got older.

As mentioned earlier, Carolyn tended to read the text of the book verbatim. Joyce, on the other hand, tended to use it as a springboard for talking about the world. Along with these different approaches to interacting around the text came a marked difference in expression of the mother's affect or interpretive stance toward the events in the text.

Here I am borrowing from the narrative analysis literature—Labov's idea that when we tell a story, we are not just recounting a series of events, but we are also engaging in evaluation by which we convey our perspective or our emotional stance toward those events. As narrators, we use a lot of evaluative devices to let the listener know why these events are worth reporting, how the characters in the story felt, why they did what they did, and how we want the listener to respond to the story. Joyce and Carolyn employed 19 different types of evaluation between them in their talk about the book, including use of adjectives, intensifiers, such as very or too, repetition, quoted speech, references to inner states of characters in the book, and explanations of causality.

Each mother tended to express more types of evaluative devices in those sessions in which she was most positively engaged affectively and in which she was most communicative. At 14 months, Carolyn expressed a lot of evaluation around the book. However, at 24 and 36 months, she expressed little, because most of what she did around the book was reading the text verbatim.

In terms of total evaluation, we found essentially the same pattern. The use of evaluative language and the more varied vocabulary that goes along with it by these two mothers appeared to co-occur with their positive expression and affect and with a more engaged style and a higher overall level of communicativeness.

Of course, the mothers are only half of the dyad. The children themselves influence the tenor and even the richness of the communicative experience. In these two dyads, there were also some differences between the two girls. They were both fairly communicative, even at 14 months. Both were judged by their mothers to understand and produce many words, although by 36 months, Joyce, who had talked about wanting to find joy in interacting with her child, judged her child to produce somewhat more sophisticated sentences.

At every age, Carolyn's daughter was more talkative than Joyce's daughter. This was most striking at 36 months when she produced almost twice as many words in the 10-minute observation as Joyce's daughter did. When we look at the variety of words that each child used, however, Joyce's daughter consistently used somewhat more varied vocabulary, even though she was not talking as much.

Finally, putting the two participants in the dyad back together again, what is most striking is the extent to which Carolyn's daughter came to carry the conversational burden in interaction with her mother. When considering the average length in words of the child's turns to the average length in words of the mother's turns, a perfectly balanced conversation would be a ratio of 1.0; the child and the mother would share the conversational burden equally. Generally in conversations with young children, adults carry more than 50% of the conversational burden.

That is part of the reason why young children look like they are better conversationalists when they are talking to an adult than they do when they are talking to a peer. Adults are scaffolding the child's participation. Joyce and her daughter are fairly typical in this respect. Even at 36 months, Joyce was carrying the bulk of the conversational burden. The picture is different, though, for Carolyn and her daughter. By 24 months, Carolyn's daughter's turns were nearly half as long as Carolyn's, and by 36 months they were fully 85% the length of her mother's. In terms of conversational load, Carolyn's daughter seemed to have taken on something of the adult role.

To give a sense of what some of this conversation sounds like, we will look at two brief excerpts from the transcripts at 36 months. In each case, the dyads are playing with a set of duplos. Among the duplo pieces is a dog duplo. The mothers and children had a chance to engage in fantasy play and talk if they chose to do so. At 36 months, Joyce's daughter said, "Make the dog go woof-woof," and then she said something we cannot understand. Joyce said, "Woof-woof, come out and play. Knock, knock, knock. Knock, knock, knock." Then the child said, "What?" Joyce said, "Knock, knock, knock, come out and play." "What?" said the child. "Come out and play," Joyce said. She was pretending the dog was speaking, and the child said, "What, what?" Joyce said, "Do you want to come out and play with me?" The child said, "No, it's raining." Joyce laughed, and the child said, "I'd like to stay in my house." Her mother said, "Dogs don't care if it's raining." The child said something unintelligible, and then Joyce said, "Oh well, I'll go and play with somebody else." Both participants were involved in the conversation although the adult was introducing the idea of this dog duplo talking and carrying the fantasy to a different level.

When we look at Carolyn and her daughter, Carolyn said, "This is the dog house." Her daughter said, "That's a dog house?" "Yup, it's a dog house," Carolyn said. Her daughter said, "Then open this door, and open this door, and the dog has to say hello. The dog has to say hello, dad, hello dad, hello, dad, how are you, dad, how are you, dad, how are you, dad? This is the puppy, this is the puppy's dad." Then Carolyn said, "Yeah?"

The impression alluded to earlier that Carolyn's daughter had virtually taken on the adult role is reinforced here when the child initiated the fantasy play and took it to a higher level by incorporating fantasy talk, by having the dog call out to his dad, and so forth. If we were to look at the whole transcript, we would see this dynamic played out repeatedly. The child was the one who suggested when they should read the book, when they should reread the book, and so forth.

Of course, we are looking at some of these same things for our whole sample, but what do these two case studies suggest for intervention practice? The first thing is that most parents do understand on an intellectual level the importance of talking to infants and reading to toddlers. All the parents in our sample acknowledge that this is important and that they do that.

For the few parents who may not understand this on an intellectual level, it is information that can be conveyed relatively easily. However, intellectual understanding is not sufficient. If the parent does not find joy in the interaction, or if, for whatever reason, she is inclined to be more affectively subdued and less communicative, a high level of engagement with the child is probably difficult to sustain over a long period of time. Especially in a culture that values children's autonomy, it is easy for some individuals to become less actively engaged as the child herself or himself becomes more independent and more verbal.

Emotional disengagement does have implications for children's language and emergent literacy experiences, and that is why we are talking about evaluation. The enjoyment or lack of it that parents and other adults experience around reading books with children is subtly communicated to children via the use of evaluation, and by engaging in talk that goes beyond the text. Furthermore, children's understanding of how the story world relates to the real world of people and their thoughts, feelings, and intentions about events and causality is dependent on interaction around books with emotionally engaged adults. Likewise, children's vocabulary growth is dependent on hearing words used in many different contexts. That does not happen if the quantity of talk is too restricted.

We do not mean to suggest that mothers bear the sole responsibility. In fact, we have looked at Carolyn's daughter interacting with her father figure in a similar dyadic context, and he is one of our more verbal father figures. The tenor of their interaction is different. Thus, certainly, other adults, including fathers and day care providers, play an important role.

Regardless of who the adults involved are, the take-home message is that we need to be more cognizant of the ways in which adults' affect and communicative behavior together constitute children's language and early literacy environments.

Barnard: The next topic, which is becoming increasingly important for all of us, has to do with monolingual or bilingual environments. Eduardo Armijo and Joseph Stowitschek are doing a project to analyze the language of children in bilingual and monolingual Spanish immigrant families in the Yakima Valley in the State of Washington. Ed will be presenting some of their analyses of the language environment in these two types of households.

Eduardo Armijo: I will go over some of the characteristics we are noting in our research data. One of the things we are focusing on with our families is language development and the development of social skills and social interaction. We are doing this in conjunction with the Washington State Migrant Council, which has an Early Head Start program. They approached us initially and asked if we would submit a proposal to partner with them as part of the national research that was then being proposed 4 or 5 years ago, and we agreed.

We asked them what kind of areas they were interested in focusing on for local research, because we knew the protocols for the national research. Among the areas that the Migrant Council was interested in at the time, and still are with all of their home educators, were language development and the development of social skills. These are areas that they are trying to emphasize to the population they are working with, a large percentage of whom are migrant farm-worker families. As the program puts it, they are working from a cultural perspective. They are encouraging the families to work with their children in the language they are most comfortable with, mostly Spanish in this case. At the same time, they want to emphasize to the families that they must somehow acculturate themselves to the society or the communities that they are living in. Thus, there is a paradox; they want the families to maintain their cultural values, norms, and language, but, at the same time, they want to Americanize them.

We looked at the literature, and this quote sums up much of what we are focusing on: "Communication skills are the most important prerequisites for social interaction. Individuals who cannot talk are limited in their social relationships in that only very primitive concepts can be communicated nonverbally." The program's emphasis on language with the families contributes to their eventual attainment of social intervention skills, social self-sufficiency.

We partnered with the Migrant Council and identified some specific areas of local study. The first area deals with how parents utilize skills for raising and nurturing their children to improve self-sufficiency. The second area is how children acquire language and social skills. We are also looking at family values, acculturation, and enculturation and how these are imparted to their children. A fourth area is how parents become proficient as home educators.

Looking at language and social skills, we divided our families into two groups, monolingual Spanish-speaking and bilingual families. The bilingual families, interestingly enough, speak mostly English in the homes, so this was helpful in looking at differences between Spanish-speaking and the English-speaking families.

To give a sense of why we are focusing on Hispanics and Mexican immigrants, we have found that much of the social interaction and language development literature focuses on a European-Anglo perspective. We wanted to contribute to this, but we also wanted to see what kind of patterns emerge between the monolingual Spanish-speaking families and the English-speaking families and whether these patterns support the scant literature we found when we set up our study.

We noted that language development is a pivotal issue for programs serving large numbers of Hispanics, especially where the language, in this case Spanish, is different from that of the whole society where these families are residing. Many of these families only reside in this country for 7 to 9 months of the year before going back to Mexico for the winter.

A total of 189 families were recruited for the research sample. Ninety were Early Head Start families, and 89 were comparison group families. We are looking at a subsample of approximately half those numbers in each group for our local research.

Since our local research group was selected at random as well, the demographics more or less reflect the larger group. More than 95% of the families are Hispanic. Almost half of them are single parents, with the majority of those being teenage mothers, and 63% being monolingual Spanish. We noticed that only about 63% of our assessments and protocols were done in Spanish. When we talked with the program staff, they thought that number would be higher, so our staff looked into that. In talking with the families, 37% of them considered themselves bilingual, but likely to speak mostly English in the home.

Only 15% of the families have full-time employment, while 59% percent of them consider themselves seasonally employed or fully unemployed. Most of those are seasonally employed. They begin planting and preparing the fields in the spring. Early summer is an extremely busy time of year in the State of Washington. The cherry harvest has started, so many of the fathers and mothers are working 12 to 16 hours a day picking cherries. They start out with asparagus harvesting early in the late spring or early summer, then harvest the cherries, and finally finish with the apples in the fall. Thus, right now, they are hard to contact to collect data. Our staff is in the homes many evenings. The families are not available until 8:00 or 9:00 at night to let us videotape them, to answer our questions, and so forth.

Education levels are low. Only 8% of the families are high school graduates, and 38% have completed the 8th grade. About 38% have had some high school education, but consider themselves graduated at 8th grade, never going on to high school. The mean annual income is less than $9,500 per family. This is a little higher than the mean for the strictly farm-worker families, for which the figure about 2 years ago was approximately $7,500 per year.

That is a profile of the families we are working with. The language data we collected were taken from 10-minute videotapes. We asked the families to engage in some sort of free play activity with their children. We also asked them to play with the children as they normally would, even though we were there. We got some blank looks from many of the families, so we had to elaborate on that by asking them what they did when they played with their children and what kind of activities they engaged in. Then we asked them to set up their own situation: "What would you do, typically, to play with your children?"

We used a couple of protocols. One was a functional language protocol, which we developed based on some protocols used in other studies. We also used a social intervention protocol to collect some of our data. For the functional language protocol, we wrote out the actual dialogue between the parents and the children in 30-second intervals using the videotapes. If there was no dialogue, we noted the kind of actions or activities that were taking place. Corresponding to that, we wanted to know who was talking or who was being engaged, and whether it was the target child. There were other adults and oftentimes peers present in addition to the mother. We wanted to know who initiated the conversation or the activity, if there was a corresponding response, and if it was a continuous activity. We classified tone as positive, neutral, or negative in nature. Our staff and others are transcribing the videotapes, but it is a long process. Each videotape of a 10-minute activity can take anywhere from 3 to 7 hours to transcribe.

In one particular case, the mother was very talkative, trying to initiate a lot from the child. The child did respond on occasion, but the mother talked rapidly, and the child would often look around with a confused expression on her face. However, the mother was trying to engage the child. She said that was what she typically did when she worked with her child, because it was what she had learned from the program. To a degree, the mother was also performing for us because the videotape was running and she felt the need to do something, even though we instructed the families to do what they normally did. Some literally did this. They would go on just washing the dishes or preparing dinner while the child sat there looking at them. Still, many of them did feel the need to talk more and try to do more with the child.

In another example, throughout the whole 10 minutes of videotape, the child actually tried to engage the mother, but the mother was too busy. It was late in the afternoon, and I was at this home while this was being done. The mother said she had to spend all of her time doing housework, so she continued to do that. She relied on the child's brother to interact with him, but his brother was not interested in playing with him that day. The child was wandering around trying to get the mother to do something with him or playing with a toy and not getting a response. The one response we saw in this minute and a half was that he walked up to the mother to do something, but she just looked down at him, and then walked away to get something out of the refrigerator. Thus, there were instances where there was not much interaction or dialogue, and that is typical of what we have seen in several of the Spanish-speaking only homes.

We also use data from a social interaction protocol to supplement the functional language data. We looked at 10-minute episodes again and record what was happening every 10 seconds. We observed the person engaged, the type of interaction initiation, response, and continuations from the adult, peers, and the target child. We noted whether the engagement was active, passive, not engaged, or inactive. Proximity between the target child and the adult or peers is something we are always looking at. We also noted the location of these activities, if that is of any interest.

We will now look at some of the social interaction data. Initially, we were concerned with only the sheer number of words spoken, or, in the case of many of the children, utterances made and actions taking place during those 10 minutes. In both the Spanish-speaking and the bilingual families, there is a much higher volume of words being spoken on the part of adults and peers, which is what we expected. However, we did not expect such a high number as 353 words and utterances on the part of the Spanish-speaking adult peers. When we piloted many of our protocols and did some initial data analyses of the families, that number was much lower, which is what we had expected going in. However, as we got into the study and looked at a sample of 19 or 20 for the bilingual families and a sample of about 30 for the Spanish-speaking families, we found that number to be much higher. What can we attribute that to? Perhaps the families felt the need to perform more for us on videotape, although they did stress that this is how they typically would play with their children or speak with them when given the opportunity. Also, many of these mothers were pregnant when they enrolled in the program and had been receiving some kind of services from Early Head Start staff prior to the child being born. These data were taken when the child was14 months of age, so that could be a factor, and is something we will investigate more. There was more comparability on the part of the children, who made mostly utterances. Spanish-speaking children made 66 utterances, and bilingual children made 63 utterances in a 10-minute period.

With respect to initiations and responses, there were a few instances in our videotapes of fathers being present, but they did not participate much. Many times they were present in the homes, but they were behind the camera. They were either too shy to be in front of the camera, or they were behind the camera trying to direct the mother, saying things like, "Speak up," or "Explain that further." That could contribute to some of the mothers' dialogue mentioned earlier.

Thus, the fathers were present in many of the homes; they just did not want to be on camera. In subsequent videotapes, many of the fathers were beginning to question why we were doing this a second and third time. They did not fully understand what we were doing, even though we explained it. The mothers have welcomed us into the homes wholeheartedly, though, and we have built up a trust with all of our research families.

The fathers, who are rarely in the homes because they are out working, are always somewhat leery of us being in there with video cameras, asking a lot of intrusive questions. Many of the families are there illegally and are afraid to report income. They always are afraid and looking over their shoulders. Now that the father study is proceeding, though, we have built up a trust with many fathers. In fact, many go out of their way to welcome our staff into their homes at 9:00 or 10:00 at night to do 2-hour assessments.

We have much closer numbers regarding child initiation and adult and peer responses. The adults and peers responded at a high percentage or a higher frequency to child initiation. On average, the Spanish-speaking child made nine attempts at initiating, while the bilingual child made eight such attempts. The bilingual adult peers responded at a higher rate than the Spanish-speaking families, and they responded more so to the children than the children responded to them.

We observed one family who was very verbal, trying to engage the child a lot. The mother was engaged with the child, trying to get the child to speak and to respond to all of her questions. Even though the child had a disability, Down's Syndrome, the family was very engaging. The brother loved this little child. I noticed that was the case even when I was in the home without the video camera. The child did not make utterances, but he responded and communicated by making clicking noises with his mouth and clapping. He was an engaging child and stayed active.

In another family, the mother was not very verbal. She was always tired. She worked in the fields quite frequently, going out at 4:00 a.m. and coming in at 11:00 a.m. She relied on the older sister to work with the child. The older sister read books to the child. The mother was illiterate, so when she worked with the child, it was mostly through picture books. The sister was the one who mostly worked with the child and kept her frequently engaged. Even when there was no camera present, the mother was not very engaging with the child. She did not feel comfortable applying what she was learning or what she knew needed to be done.

There are some trends or characteristics of the findings. There were more words and actions from the bilingual families' adult peers compared to monolingual families. There were also slightly more words, actions, and initiations from the Spanish-speaking children. In addition, there were a higher percentage of continuous activities between the children and adult peers from bilingual families. Most of the bilingual families were lead by single mothers, many of whom were teenagers. They said that they were raised speaking Spanish as second- and third-generation migrants who had settled into the communities. Although they were raised speaking Spanish, they speak only English to their children when they are young, because they want them to fit into society and not have the barriers they encountered coming from a Spanish-speaking monolingual family. They stressed that they would speak only English to their children so that they would fit in and would teach them Spanish when they were older.

Of course, on the videotapes they spoke mostly English to the children. In observing them without the videotapes, a lot of Spanish did slip in. The mothers may not realize this when they are speaking with their children. The Migrant Council people call it "Spanglish," a combination of English and Spanish, and that is what they are really teaching the children. A sentence that is mostly English will have a Spanish word thrown in to make sure the children understand.

The mothers stressed that they want to speak only English to their children at such a young age so that they will fit in. These are changing communities. In terms of population, in some places where the Hispanics were the obvious minority 10 or 15 years ago, they are now the majority. These communities have changed a lot due to the number of Hispanics moving into the area, so it will be interesting to see how the differences between Spanish-speaking only families and English-speaking families play out over time.

This has been a glimpse of what we are looking at and where we are. We are coding and analyzing 24-month data now to see what kind of changes might have occurred between 14 and 24 months of age. These are some of the characteristics we want to focus on initially between these two groups of families.

Barnard: Let us go back to two points that Rutter made this morning about factors that become important in later psychopathology in the area of the person's relationship history and also the person's communication process. One of the things that we have been studying in Seattle fits into the area of attachment and relationships. In a number of projects with high-risk samples, we have been trying for a long time to influence the security of the child's attachment to a mother.

Recently, in studying the Early Head Start program in Kent, Washington, we have had some clarification of the problems and issues. Going into the study of the mothers' attachment history, we hypothesized that there would be a high number of insecure attachments. In fact, in at least 75% of the poverty population that we have studied, mothers have insecure attachments according to the Adult Attachment Interview. Thus, there is a lot of work to do out there.

In the last few years, we have seen in the lab that the behavior of these mothers as they interact during the attachment and play segments often shows that they do not have a lot of initiating behaviors with their child. Invariably, after the stranger in the attachment period interacted with the infant, many of these mothers would come back in the room and imitate everything that the stranger did.

Periodically, we would go out and talk with the home visitors, and they began looking more and more depressed. We tried to find out if they were having success with their families. We asked them to identify families that were hard to work with. The home visitors' experiences with these mothers were that often these mothers would never talk to them. The home visitor would go on the visit and have a session about how the mother was going to interact with the child and be joyful and happy, and the mother would just sit there looking. After they went on a weekly home visit 20 times and the mother hardly talked to them, we discovered that the home visitors had to take themselves out to lunch. Looking at those mothers in adult interaction, we found that they were very noncommunicative. They were almost totally emotionally unavailable for their children.

We have case studies that are quite fascinating in terms of how these children just go down the chute even in the first year of life while one stands by helplessly. We wanted to help one family so much that we tried to think about how we could provide a safety net. Eventually, the program developed an adjunct program. Instead of doing home visiting, we had something we called "play works." We brought the mothers that were the hardest to work with, according to the home visitors, into these "play works" sessions. They came in three times a week for 4 hours at a time, and the child development staff began working with them. All of a sudden the home visitors began to say, "What is happening? I've been visiting this mother for at least 12 months, and now all of a sudden she is doing these things at home that you are teaching her in the play works, and she has never done them before."

This relates to what is happening in our project. These mothers do not have any models for how to act or interact with their children. In talking to them about their history, many of these mothers say they never had a mother. In fact, in the qualitative analysis of the interviews, we called these mothers "motherless children."

It is exciting to see that when you put the best pieces together these parents are learning about themselves, their children, and other parents and children. We are beginning to put some models into their minds that they can draw from in their everyday parenting.

The language issue is so important. I used to say, "If you have to give any message to a parent, tell them to talk to their child." What these researchers are telling us is that it is not just talking to their children, but how they talk, what they talk about, and so forth, that is extremely important.

AUDIENCE QUESTIONS AND COMMENTS

Question: I would like to ask Drs. Cooper and Marvin, in Years 2 and 3, you began with a new group of parents. Are there any plans for a longitudinal study to look at how those groups evolved over time and if those effects remain?

Cooper: We will have a 1-year follow up, and then we have many plans.

Marvin: The plans are in the works in terms of getting funding for it.

Question: Is an intervention planned in the interim?

Marvin: No. I have two reactions to that, though. First, part of the data that we are collecting is from a life event scale. This will allow us to sort out why for some families the effects may have held and for others not. The other thought is that it seems clear that in the long run, without ongoing support, the chances of any changes that do take place hanging in there with these high-stress, high-risk families, are not great. Thus, in terms of a longer-term study, one thing that we are talking about is the type of ongoing support that could be provided. Early Head Start home visitors might provide support that is designed in this same direction. Ongoing support is going to be absolutely necessary.

Cooper: Furthermore, the parents are asking for it.

Question: I have two questions. First, what you are doing is encouraging in terms of moving that dyad towards enjoyment, help, support, and so forth. You all are experts at seeing these things and thinking about moving that intervention technique out so others can do the same thing. What do you think it is going to take to build similar teams that can do that?

Second, particularly in Eduardo Armijo's presentation, but also in Barbara Pan's, I saw this idea that for some families, we are not just talking about dyadic relationships in which communication occurs, but also the communication and the movement towards literacy that occurs with multiple family members. Can you comment on that?

Cooper: We are looking at that too. We are working with a number of groups, including some of the Family Services Coordinators in Spokane. We think it will be a 1-year process of training people and providing ongoing supervision.

Marvin: Part of the plan for the grant was to have a component in which we would teach others, such as the family service providers and the Family Services Coordinators, to do it. In addition, we are also working with some other projects right now, trying to teach the protocol to them. Thus, the teaching component will be important in the long term. We realized that it would not be efficient fiscally if it always has to be somebody with the level of skill and background that we have. Therefore, we will bring it to the level of someone who is perhaps even a paraprofessional. It will be more complex, involving someone who actually does the intervention with some supervision. That is one of our goals.

Barnard: Even if it does cost some money, it is better to do it right than to pour a lot of services in that do not do anything.

Armijo: I agree with your observation, Bob. These families are depending on multiple family members interacting, speaking, and teaching the children. In qualitative interviews with the mothers, many of them said their own parents or even grandparents did not specifically teach them these kinds of skills that they are learning now. They were raised, to paraphrase an old cliché, to speak only when spoken to. They were encouraged to keep quiet and only respond to questions and answers. Now, they are trying to encourage their own children to initiate conversation, and the children are depending on peers to do that. These may be older peers who are already in the public schools who might speak English and are accustomed to interacting more. Thus, they are learning from other children as well.

Pan: We are looking at fathers and father figures interacting with their children at these same ages, are transcribing some of those videotapes, and looking at the interaction on a more micro level. It will be interesting to have a look at cases where there is more congruence in engagement style between the mother and father, as well as cases where there is less congruence. One of the examples that I gave is a case, Carolyn, where there is a lack of congruence in engagement style between the mother and father. We do not really know what that means for children, but we are interested in pursuing that.

Marvin: Listening to Barbara Pan's presentation and thinking about our own work, I was fascinated by her results. It goes back to Kathryn Barnard's comment about the importance of relationships and interactions and how artificial the distinction is between the patterns or the style of conversations between mothers and children and the pattern of their attachment. We are taking different slices out of the pie.

The same two patterns that Barbara described with Joyce and Carolyn map clearly to two different attachment patterns that we find in our project, with Joyce's dyad being the secure, autonomous child and the Beta secure mother, and Carolyn's dyad being the avoidant child and avoidant or dismissing mother. They map on to one another. Thus, this is all about the interaction between the two. Even if one is talking about trying to help a child in terms of language skill and language use, one is not talking about language; one is talking about the relationship.

CONVERSATIONS WITH KATHRYN BARNARD, PATRICIA KUHL, AND ALAN SCHORE

Brain Development

Patricia Kuhl: Let me begin by underscoring two points from the plenary this morning. The main point is that infants are surprising us with regard to the strategies they use to acquire language. Research shows that in the 1st year of life, infants are analyzing, sometimes statistically and computationally, the language input that we provide them. We did not know these tactics existed. It has shaken up the theories and suggested a new view of early development.

The combination of findings on the kinds of learning of which infants are capable, coupled with how we as parents and caregivers participate in that, is important. The early studies on motherese looked with amusement at the silly-sounding style of speech adults use to talk to infants. Because it sounded silly, researchers took motherese to be either a Western phenomenon or something we did but that it played no role in language acquisition. Now the data suggest that the units we use when speaking to infants are well formed and probably assist in helping infants with the mapping we think they are doing.

Question: Have any studies been done with mothers who are depressed or experiencing other mental illness and their use of motherese?

Kuhl: We have anecdotally looked at teenage mothers who had unwanted pregnancies but took the pregnancy to term and were raising their children. We studied their speech. These mothers might not all be diagnosed as clinically depressed, but they are young mothers who are unprepared for the job of caregiving, and not delighted about it. Those teenage mothers did not demonstrate the raising of the pitch of the voice. Nor was there an extraordinary attempt to communicate with eye contact and drawn-out vowels.

We do not know what this means with regard to outcomes for the infant. In fact, no studies have tied how parents communicate with child outcomes. We know that lack of talk to infants hampers language development. However, we do not know the amount of talking required for optimal outcomes. We are attempting to look at the quantity issue, and we are also interested in the quality. Can we tie the listening environment of the infant to an outcome that we can measure before the end of the 1st year when this mental work is being done by the infant listening to speech? Studies are underway, but there are no outcome measures.

Alan Schore: In terms of emotional communication, Tiffany Field has conducted research with depressive mothers and her latest study shows that infants of depressed mothers are less expressive at the end of their 1st year. They show flat affect and vocalize less. Her results also show that when these children go to preschool, they show less empathy, and show right frontal abnormalities. Emotionally speaking, there may be deficits at later ages and this may be related to the intergenerational transmission of depression.

Kathryn Barnard: Geraldine Dawson, from the University of Washington, in her study of depressed mothers, found that when depression occurs during the 1st year of life, the outcomes on the child occur more often in the affective domain. However, when the depression occurs in the 1st and 2nd year, it affects the cognitive and language domains more often.

Kuhl: We will have to keep following these children to examine how various periods in development affect long-term outcomes. Regarding language, children are so plastic during the early period that even if there were problems in the 1st year, it is possible that having additional speech directed towards children in a more animated fashion in the 2nd year can compensate for stimulation missing in the 1st year. This is the reason we do not want to conclude too

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quickly about the necessary level of language. We do not know yet what the language device needs to keep it alive and make it thrive. The recent discovery of the kind of learning that goes on earlier than expected leads us to wonder what it takes to promote it.

Question: Could you address the multimodal aspects of language learning?

Kuhl: A decade ago, scientists were primarily adhering to the dimension they were studying, either the auditory system or the visual system, and isolating their effects to particular domains. Now, more studies examine the multimodal event as the one that is real and having an impact on the infant.

In speech, if both the auditory signals being produced by mothers and their facial expressions are examined, there is a high match between the exaggerated intonation contours, from the standpoint of prosody, and the exaggerated vowel formants that make the "ees," "ahs," and "oohs." All sounds stand out crisply because they are exaggerated by the mother. By looking at their faces, we see eyebrows shooting up and the articulators. When a mother produces an "e" sound, such as in the word bead, we can see the corners of her lips are very retracted. These are the kind of exaggerated and animated speech signals that we give to infants.

We do this for two reasons. First, it can be sorted on the sound dimension. In the pitch of voice in a low frequency range (100 to 500 hertz), mothers are increasing the prosody and the intonation and drawing instant attention to them, because it is an animated-sounding and a positive affect-sounding signal. With respect to the articulators, mothers are greatly exaggerating the movements and the sounds that result from those movements. The infant is getting a multimodal double dose: the units in the speech and affect. It is both an emotional message and a linguistic message. It seems ingenious that in the evolution of language, we combined a signal that attracts the right hemisphere, the emotional part of the message, and embed in that the linguistic message. The symbolic and the emotional are tucked in the same event, both exaggerated greatly to draw instant attention to this important signal.

Schore: Multimodal situations are working both on the receptive end and also on the expressive end. The infant is analyzing visual, auditory, and tactile information as it arrives. This also affects the organization of the brain, putting together these different circuits into a circuit. The interconnections of the modalities are extremely important for future cognitive and language development, but also the emotional development of the infant.

Also, underneath all of this is arousal level. With depression there are low arousal levels. However, with abuse, there are high hyperarousal levels. Those situations are not optimal for pulling together multimodal pieces of information. Arousal level, therefore, will affect all of these and perhaps, more importantly, block the integration of these circuits coming together in the right hemisphere, and also the right hemisphere to the left hemisphere.

Question: While a quiet alert state is best for learning, Dr. Schore has made the point that high intensity affects are also critical. Could you elaborate on that continuum?

Schore: I suggest that from the quiet alert state an infant can go to the play state, and that the play state is a regulated high-arousal state, not a disregulated high-arousal state. This regulated high arousal state has good vagal tone, and parasympathetic as well as a higher sympathetic activity. This may involve higher regulated levels of dopamine, which allows new capacities to expand and also perhaps advances the attention system at a higher arousal level. Thus, over the 1st year the infant can now accommodate higher and more regulated levels of arousal, which therefore allow for more complex functioning if arousal is also related to metabolic imaging.

Barnard: In what state are most of the infants when you test them?

Kuhl: This is a very difficult task. In the plenary, I showed a slide of a head turning task that looks deceptively simple. However, when the components are analyzed, one can see how much the infant is in control of the situation. One sees the infants at an alert eager state in which they are economic in their movements. They are watching the assistant, and as soon as the sound changes, they turn their heads over to catch sight of the toy. This only lasts 3 to 4 seconds. Then they will instantly turn back to see what the assistant will bring out of her box of toys next.

When I watch these infants, I think of them as sponges, absorbing information and enjoying control over the contingencies. They seem aware of the fact that when they turn their heads, because they have been listening well, that a monkey or some toy is going to come. They know when they turn back to the assistant, she will have a new toy. They have expectancy, and a pleasure when this happens on cue. They seem to enjoy the setup. It is exhausting for them. When it is over, they fall instantly asleep. It is hard work, but it is work that they love doing.

It is similar to the situation one sees when a parents and an infant are interacting face to face. We see turn taking as early as 12 weeks in their utterance exchanges. The laboratory studies say that it only takes about 15 minutes, 5 minutes a day distributed over 3 days in the lab, to coax an infant to produce simple vowel sounds more like the ones that they were hearing the caregiver say.

We can alter what the infants produce in a laboratory by having them face a video and watch a woman say "ahh." They seem tuned to trying to replicate this sound, which is difficult as it requires controlling the tongue, lips, and engaging these pieces to produce a simple sound like "ahh." They struggle, but the tendency to want to imitate is extremely strong.

Comment: I conducted a pilot study examining a library project that was distributing books to preschoolers from families with low incomes. They wanted to extend the program to reach parents with infants. While we are not teaching the infants to read, we are teaching them language and teaching the mothers how to spend quiet time interacting with their child around a book. They are forming a relationship with that object—a book. We found that with the distribution of books on a biweekly basis, mothers had a 70% increase in sitting and reading to their infants. The mean age of these infants was under 9 months old. Now I would like to expand the outcomes in the project to see what else is happening.

Schore: In the broader area of communication of which language is one aspect, looking at infants is an area that puts together the social-emotional context as a scaffolding for the emergence of other further cognitive behaviors. The division we used to see between language and emotion does not work. The other piece that comes out of that is the transactional model. There are literally two-way communications going back and forth. This is not a matter of a new behavior coming online because the infant is a passive recipient of what is coming from the parent, but the transaction back and forth between the both of them scaffolds development.

Barnard: Pat, could you speak about why tapes do not work?

Kuhl: It relates to the point that communication is a two-way street. I am willing to conduct the experiments to determine whether tape-recorded language in the infants' earshot makes a difference to their development. My guess is that because it is a unidirectional, as the infants are not able to interact with or have the person who is speaking direct attention to either a book or an object, the language on tape will not be of the same quality.

The arousal and affective communication that also occurs supports learning. When I watch parents and infants interact, I see a high level of sympathy or empathy with one another. That must be the kind of situation in which the biochemistry of learning is fostered. There are a few animal models to support this, for example, the acquisition of song in songbirds. In the baby bird's world, research shows that hormones play a large role in the capacity to learn. In the presence of a male bird—the one that sings—the baby birds are induced to produce certain hormones, and during that time learning seems to be enhanced.

Schore: I also support that idea. Oxytocin is one of the key hormones involved. Early on, there was data to show that touch would stimulate oxytocin. Recent findings in neuroscience and biobehavioral reviews now show that the tone of voice also can stimulate oxytocin release. There are hormonal responses to these interactions, especially the affectively charged interactions. More than content is being regulated, but literally a psychobiological state is also involved.

Barnard: We have recent data that measures of the environment, such as parent-child interaction, amount of mother verbalization, or the whole inventory turns out to be more highly correlated at age 3 with auditory comprehension than verbal expression. Do you have any thoughts about that?

Kuhl: The range of normal production is quite large. It makes sense that if a study looks for correlations between a host of environmental factors, comprehension might be more correlated than production. Production has a large range because we operate with motor abilities that differ across individuals, similar to walking and other motor skills. It takes a lot to get the mouth and larynx tied together and working appropriately. Many children who will turn out normal will have delayed articulation.

In our own research, we have seen recently that the head-turn tests on perception at 6 months correlate strongly with various measures of language on the perception side, but only on some on the production side. Thus, comprehension may be a more valid measure of the brain's facility at mapping the information that the child receives. Production takes a little bit more to come online.

Schore: There is a parallel also in emotional development and language development. In the right hemisphere, there are separate systems that process the receptive aspect of emotions, including being able to read the nuances of a face from the aspect of expressing an emotion on the face. There can be deficits in one and not the other.

Barnard: We also found that the mother's verbal items are correlated with the child's auditory comprehension at age 3. Interestingly, there is a subgroup of infants who at 14 months gave many negative cues in the period of child interaction during the teaching. However, when the mother was as verbal as other mothers, and the child gave negative cues, such as eye-turnaway, hand to head, and other subtle disengagement cues, the child's comprehensive language was worse.

Kuhl: On the surface, it looks as though those mothers might be overloading the infants. Again, communication is a two-way street. Mothers and infants are both giving each other feedback about how much they can take and how much they want in a given situation. Some mothers are not good at gauging when the infant is giving cues about fatigue. Intrusiveness is interesting because some people are not as good as others at judging the infant's state, or else ignore it with regard to how they respond. Both people in the communicative exchange should be paying attention to one another; as adults we do the same thing.

Comment: I studied high-risk, pre-term infants in intensive care nurseries, and have followed the development of the first 6 months or the early years of their lives. It is difficult for them to regulate their states and even get them into the quiet alert state. Research about infants coming from the quiet alert to a more enjoyable state and then coming down again with the caregiver is of interest to me. We have to teach the infants to get to a quiet alert state. Also, the infants change states so rapidly and abruptly that caregivers are almost afraid to take them to a more aroused state because it is difficult to calm them.

Schore: This relates to the matter of the infant as if there is such a single entity. First, a male infant and a female infant are two different entities. New research is showing different affect regulation capacities of boys and girls. Boys need much more interactive regulation.

Second, there are differences in temperament among infants. The attachment research is moving into temperament, which is a genetically encoded biological predisposition. Temperament becomes central because it is a matter of being able to match the infant's state. However, there is a difference between an infant who will go from the quiet alert state into a disregulated state very quickly and who stays away from novelty. Even, however, if that is the case, if the mother somehow can make a dyadic system with the infant, usually meaning to slow down the state, then a matching or rhythmic system can allow development to occur. Frequently, though, the mother has to shift down again because her arousal level is usually quicker than the child's is. Current thought is that perhaps most problems of psychopathogenesis occur when the mother is intruding into the cycle down state more so than the disengagement state, because these are the beginnings of the infant's own regulatory capacities. Teaching a mother to be able to follow the child's rhythms is critical. A study addressing synchronicity at 3 and 9 months of age found that at 3 months, for there to be good synchronicity, the mother must follow the child's lead. However, at 9 months, they can take turns.

Question: My comment relates to studying language development in full-term infants prenatally exposed to cocaine. The literature seems to say that these infants need more arousal to respond. Did your testing situation have to change to study these infants?

Kuhl: I have not tested infants who were exposed to cocaine. We are beginning to look at children who may have a syndrome related to autism, and also infants whose babbling or other signs indicate not a hearing deficit, but perhaps a specific language disorder. These infants can be tested with electrophysiologic measures which are easier to use than behavioral measures, such as the head-turn or sucking procedures, which take more effort on the child's part. These electrophysiologic measures correlate strongly with the behavioral measures. Initial results suggest that there are going to be early signs, under 1 year of age, that some kind of phonetic processing deficits exist in children who will later develop language disorders.

I believe these procedures will be applicable to infants who have been exposed to cocaine. We have been successfully testing young children between ages 1 and 3 who are suspected of having autism. We find dramatic differences in event-related potentials to speech sounds among typically developing children, mentally retarded children, and children with the tentative diagnosis of autism.

Question: We are starting an Early Head Start program with children in child care. We are going to be encouraging the parents and caregivers to talk to the infants. What have we learned about children from communities in poverty? Is this early brain development research going to help them? Or are the differences in language comprehension and expression more related to maybe speaking a different language or a different dialect? Are we assuming that poor parents do not talk to their children like middle-class parents do?

Kuhl: That question is on everybody's minds. To date, the research includes studies involving middle-class parents who are capable of bringing their children into the laboratory. The question remains: What does the research mean for children growing up in situations in which some or all of this may not be true? What are parents in those situations doing? What are the environments in which children are being reared? For example, some studies indicate that next to a freeway, where noise levels are very high, children's outcomes may not be as good. People talk to each other less because it is noisy. In addition to the environmental factors, there are social-emotional and economic factors. There are potentially linguistic factors. Until we analyze those situations and their complexities, it is too early to say anything about what action should be taken.

Schore: I agree. I do not think the studies have been done. However, we do know that there are certain risk factors that accompany poverty. Some are fewer connections with medical hospitals during pregnancy, lower nutrition, and lower birth weight. These are well documented. How they play out in terms of brain maturation, pre and postbirth, still have to be determined.

There is a difference between talking to infants and forming an attachment bond of emotional communication with infants. Both are important. However, forming an attachment bond of emotional communication is a well-established finding that reduces risk factors for later health problems, psychiatric disorders, and psychosomatic disorders. A good attachment is an optimal situation in all cases, and there is a large literature to show that.

Comment: In his research, Joe Stowitschek, from the Yakima Valley Migrant Camp, is taping the language in the homes of Yakima Valley farm workers. They are looking at bilingual and monolingual families. The bilingual families are mainly young single mothers who felt they have been oppressed for many years because they learned only Spanish in their home, and so they are determined to teach their children English. The bilingual mothers who speak English in the home, over the 10 minutes of recorded conversation, have more language production than do the Spanish-speaking mothers.

Kuhl: We have some studies and anecdotes that suggest that the best way to learn two languages at once is to have one parent speak one and another parent speak another. It helps to keep the two languages separate. However, that may not be the best way of developing the kind of emotional bond and natural interaction that is optimal, the kind we observe when people are unstressed and following their own intuitions.

We do not have a formula for this, such as parents need to talk with their children so many minutes or hours a day in each language. It would be presumptuous of us to give that message to parents. We can say that when parents intuitively interact with their children and are not attempting to match a model, it seems to be an excellent way to promote infants' development. The message from science is to inform parents to interact with their children in a way that is most comfortable for them.

Barnard: I am worried about the trend for infant and toddler child care because the ratios are so high. When I talk to child care providers about the importance of interaction, they do not think that level of interaction is possible with groups. From the standpoints of language development and emotional security, I am worried about future generations in which this dyadic relationship does not have a chance to develop except after the mother gets off work.

Kuhl: The naturalness one sees in child care is artificial by definition. To what extent can a caregiver who is hired to take care of three or four infants feel an emotional bond to each of those infants? In the beginning, one does not have a natural emotional bond, and that may make a difference. I realize how hard every scientific question is to answer. That, combined with how important the answers are, makes me realize how much work there is to do.

My intuition is that the emotional bonds are important and that when family groups raised children, and it did not matter who in the family group, there was automatically an emotional connection to the child which promoted communication, eye contact, and bonds that involve touch, sound, sight, and movement. I do not know if that can be brought about if someone has been paid to take care of a child.

Schore: We are discussing language and communication, with communication being the broader aspect. However, if there are interactions between the emotional, cognitive, and language aspects, have you done any research using attachment categories with various types of language situations with infants? For example, it is easy to differentiate insecure from secure attachments, and then examine language behaviors. Cicchetti's studies of the language of abused children have shown that abused children show hardly any language words for emotional states, which leads to kind of a lexithymia, or no words for feelings.

This finding is a good example of the interaction between trauma and extremely poor attachments, and the effect on language in terms of language designating emotional feelings within the child. Are you thinking about any crossover using the attachment literature in addition to the language literature?

Kuhl: Separating the semantics of the situation from syntax and sonality is one direction to pursue. The question is whether those emotional attachments, or lack of them, lead to a semantic area of cognition that is not relatable on the part of the child. Then one could examine whether there is a spillover into syntax and phonetics. We can separate language into its more semantic, cognitive aspects and into its more grammatical and phonetic levels. It would be interesting to see how those two are affected in children who have very poor emotional bonds between them and other human beings.

Question: Often in my private practice I see children in foster care, and because of having many relationships, they are often referred to me at about 5 or 6 years of age because of attention deficit hyperactivity disorder (ADHD). I try to understand that in terms of how behavior is affected by poor attachments in early relationships. Am I seeing ADHD or am I seeing the behavior being manifested because of these early relationships?

Schore: My thinking is that the right hemisphere sets up early. The right hemisphere also has attention circuits to it in a different way than the other process of the left hemisphere. Two papers, "Functional anatomy of intrinsic alertness: Evidence for a frontal parietal thalamic brainstem network in the right hemisphere," and "Asymmetrical visual spatial attentional performance in ADHD: Evidence for a right hemispheric deficit" address these issues.

Biological psychiatry looks at ADHD as purely a genetic problem. However, we have talked about situations whereby gene and environmental interactions occur. If, in the 1st year, there was interference in the attentional aspect of these interactions (including emotional communications as well as language), or if the child did not have the capacity to see the reflection of someone else's attentional capacities, it seems logical that this could be an early ideology of ADHD that involved both an environmental and a genetic situation.

Barnard: I believe that attention deficit disorders begin in infancy in relation to feeding patterns. If one looks at interactions during feeding, there are some dyads in which the mother and the infant are in synchrony, and the infant gets wrapped up in the mother's face and actions, and the infant learns to be attentive through long periods of time during the feeding. Other infants do not have good interaction and the infant is never attentive to the mother. I think one could begin to identify children who are going to have attention deficit disorders from the pattern within the interaction during feeding.

Schore: It may also turn out that these attention deficit disorders are not unitary. Some research shows that dyslexia may involve more dysfunction in the left hemispheric circuits, while the attention disorders that are associated with emotional disregulation may be more on the right. However, there is such an entity as right hemispheric learning disability. As adolescents, these children show extremely high suicide rates. There are serious problems down the line.

Question: Could the panel discuss major neurobiological development for 3-, 4-, and 5-year-olds?

Kuhl: There is a gap in our knowledge on the language-speech side that coincides with the period between about 2 and 4 years of age. Between birth and age 2, the techniques are advanced and people have been learning a tremendous amount about the initial phases of language acquisition. Once children get into preschool and kindergarten, research identifies children who look as though they are having trouble with reading. There is a host of work that begins at about age 5, and studies on dyslexia and various theories about what goes wrong as well as treatments that look promising with regard to ameliorating some of the problems. However, there is a gap between ages 2 and 4, and there are few good techniques that work. Thus, few studies on large populations have been done.

Schore: The same gap exists in the social-emotional domain. Suomi found with his monkeys that they get a shift of hand lateralization at the equivalent of 2 to 4 years of age in monkeys. The hand lateralization turns out to be the dominant right hand, but early on it is something else. My speculation is that if the right hemisphere comes on line first, and then the left hemisphere comes into its own at 18 months, they shift back and forth. However, it may be that between 2 and 3 years of age, both of these hemispheres are not yet communicating. These information-processing systems act as independent entities.

It may be that the right hemisphere is dominant until 3 years but then it changes at 4 years, because between ages 3 and 4 the left hemisphere is sending colossal axons over to the right and inhibiting it and dampening it. We may be seeing between ages 3 and 4, for the first time, dual processors come on line. If there were any deficiencies in either of them, or in the communication between them, as now there exists truly for the first time a dual brain system that is interconnected and passing information back and forth, it will lead to unique situations between ages 3 and 4.

Finally, Bowlby reported a reduction in attachment between 3 and 4 years of age. A child at $2^{1}/_{2}$ years of age comes to a nursery school and has problems separating from the primary caregiver. However, at age $3^{1}/_{2}$ the child can be calmed down by the teacher. This reduction may be this dual brain system coming on line for the first time. Again, this is speculation.

Comment: I want to address an overarching theme: the tension between practitioners and their need for immediate advice, and researchers who do not feel comfortable giving advice that is prescriptive. The field needs guidance on ways we can train practitioners in the classroom.

Barnard: With my colleagues, I have developed some scales on parent-child interaction, the NCAST, based on the literature. It is exhaustive to learn, and pushes one's short-term memory. It takes over 50 hours of training to become reliable. However, when people go through NCAST training, it changes their perception, cognition, and behavior about parent-child interaction. I have been struggling with the kind of training child care providers need in terms of parent-child interaction, when it is competing with other training needs and child care providers only receive limited training in a year.

I have decided to push the envelope. Unless there is a mind shift in terms of what caregivers are looking at, with respect to contingency, cognitive activities, and watching for cues, child care will not improve. However, once a caregiver knows this information, there is no need to ignore observations about the interactions. Learning all the minute items of the scale during the reliability training rewires participants' brains, and they behave differently. David Olds insists that anybody who delivers his project participate in NCAST training because if they completed this training, they deliver his protocols differently than if they did not. It is an obligation of us in science to begin to think seriously about what we can do to disseminate research and improve practice.

Kuhl: At some time in the future, the field ought to develop a degree program in early child care, just as every other form of education. People who care for children should be specifically trained for that job. While there are no prescriptions for them to follow, there is a knowledge base of what we do know about children, and an awareness that is promoted by learning the research.

Comment: There is an Infant Child Development Associate's degree (CDA) that has been developed. Also, some states are looking into infant certification. The field is in the process of doing those kinds of things. Additionally, in our hiring practices, we know that some people are more nurturing than others. We want to choose those that are going to nurture and be more likely to form bonds with the infants.

Comment: In Early Head Start we have people who have to go to work, although they would rather stay home and care and bond with their children. In this morning's presentation, I was particularly impressed with the bonding, holding, and the brain and chemical changes occurring in the body. That same result cannot be obtained from a hired caregiver, because people do not respond to other people's children in the same way. Why does every woman have to work? Are there some people who love children that want to be caregivers and can do it innately? Why are we saying that people who have not gone to school but have this skill naturally are not providing good care?

Kuhl: It is the case that from the age of 5 on we are willing to entrust our children to teachers. For large portions of the day, our children are bathed in whatever attention the teachers have been taught to give to the children and whatever they know about the mental, social, and cognitive development of the child. I do not know that in the birth to 5 age range which direction we are headed. Are we going to attempt to train teachers who are more informed about the emotional state of the child and pay them better, and will that make them happier and more wanting to attach to the children? Certainly I see dedication in teachers that I cannot fathom. They develop bonds with a good number of the children.

Barnard: I encourage anyone interested to read the book by Sarah Hardy, *Mother Nature*, in which she examines across species and across cultures the issue of who cares for children. Most animal cultures, and many human cultures, do not depend solely, as we do, on young parents to take care of the youngest children.

Question: In kindergarten, children have homework. They are very task-oriented, and have many demands put on them academically. How does the research support that? Is anybody looking at that?

Schore: The way we view our infants reflects our society and values. Infancy and childhood has become compressed into a short period of time. We are too interested in getting children ready to academically enter the world before they have the social skills to be human beings among other human beings. Children need to be able to relate empathically, understand someone else's mind, and be able to play, which is an important context for taking on the skills of adulthood.

An article on the adolescent brain has recently been published in a major neuroscience journal. It examines the links between the massive reorganization in the adolescent brain, and the massive reorganization in infancy. We have seen these links between infancy and adolescence before. These are the two times when the brain is massively reorganizing.

One of the clearer links is that the effects of very early events, even if children do not show any symptoms at 2 or 3 years of age, become evident at 16 and 17 years of age. DeMassio conducted a study demonstrating what happens if the orbital frontal cortex is damaged in early infancy. He documents a case of a 3-month-old infant who had a neurological disorder and a 13-month-old infant involved in a car accident. He shows that, neurologically, the infants healed nicely. However, at about 3- and 4-years of age, they had discipline problems. At about 7 or 8 years of age, these problems began to exacerbate and ballooned into what clinicians would call a borderline disorder at 16 or 17 years of age.

The connections that are forged in infancy play a role in what happens in adult life. The early idea in neurology was that infants have tremendous plasticity. This is not the case. In fact, the opposite is true. Frequently we do not see aggressive disregulation at 2 years of age, although we see it more at ages 6 and 7.

Barnard: At entry, we administered the Adult Attachment Inventory (AAI) to the mothers to try to understand why some mothers and families did not participate in the program, even though it was available. Participation is related to mothers' relationship history. Mothers who the home visitors labeled as disengaged showed on the AAI unresolved loss or trauma. They cannot relate to the program and they cannot relate to their infants. Often, the home visitor conducts a visit promoting development and family goals, and these women, surprisingly, received a high amount of service. They sit and usually stay during the home visit, but they do not interact with the home visitor.

Interestingly, we also asked the home visitors to identify the mothers with whom it was easy to work. Those mothers' AAI classifications are dismissive. These mothers had an equal amount of trauma and stress, but had dealt with it. One thing that was different about those mothers who did not engage in the program and those who did was the mothers' report of play in their history. The mothers who were easy to work with (most of them have dismissive attachment), remembered fun when they were children.

Schore: There is one particular problem in infancy about which child psychiatrists and infant psychiatrists are becoming extremely concerned: the problem of dissociation. Type D infants dissociate, which is evidenced by a glazed look and the child is withdrawn. During psychological testing at 12 months, they suddenly tune out. This is a severe psychopathogenic problem. The concern is that if infants stay in these dissociated states for long periods of time without interactive repair, the neurochemistry of the brain is going to be extremely damaged. When children dissociate at an early age, it becomes a characterological situation. Psychiatrists are becoming extremely concerned about this and reporting it more often.

There seems to be a gender effect. When boys go into disregulation, they go into more hyperarousal, but girls go into dissociation. At 4 or 5 years of age, when a boy goes into disregulation and moves all around the classroom, he is noticed. However, the girl who looks compliant and complacent, which is a form of the trauma, is not identified and yet her cortisol levels are very high. In England, they are having more success with disregulated boys than reaching the girls who go into these dissociated states. This appears to be a red flag among parents. It is occurring as early as 2 months. There are biological mechanisms deep within the brain literally to shut off everything going to the cortex and just keep the body alive. When this happens, it goes into a severe hypometabolic state. The problem is that there is no energy left for growth.

The problem is the lack of interactive repair. If there is no repair, then the child stays in this state for a long period of time. However, it may look as if the child is not necessarily in the disregulated state. The pediatrician may diagnose the child as complacent. Diagnosing dissociation from complacency becomes important. In one case we need to respond to that danger signal quickly. In addition to knowing about how a positive relationship builds coping skills, Early Head Start should also know early the red marker symptoms that are high risk.

Getting Started in Early Intervention for Infants and Toddlers With Disabilities

CO-CHAIRS: Donna K. Spiker, Jean Ann Summers
DISCUSSANT: Lynn Milgram-Myers
PRESENTERS: Donna K. Spiker, Carla A. Peterson, Kathleen M. Hebbeler, Jean Ann Summers, Shavaun M. Wall

The symposium presented descriptive characteristics of over 3,300 families being served in Part C programs for infants and toddlers based on initial findings of the National Early Intervention Longitudinal Study (NEILS), as well as parents' perspectives about their experiences in entering and participating in Part C programs. This sample provides an opportunity for comparison with descriptive data about the characteristics of children with disabilities who are in the Early Head Start Research Consortium (EHS) sample of nearly 3,000 families. In addition, a small sample of families and service providers from EHS Consortium research sites were interviewed to discover their perceptions about the experience of collaboration in families who are dually served by these programs. The symposium provides an opportunity to identify potential gaps in services for both Part C and EHS, as well as family perceptions about receiving services from both these programs. It also provides information about issues and factors that should be considered to facilitate optimum collaboration between these two programs.

■ Who are the Children and Families Served in Early Intervention?

Donna Spiker, Rune Simeonsson, Anita Scarborough

The National Early Intervention Longitudinal Study (NEILS) is a first ever study of early intervention with a nationally representative sample of infants and toddlers with disabilities. One of the NEILS goals, to describe the characteristics of children and families in Part C programs, was the focus of this presentation. Initial data collection results were presented, using enrollment forms and first family interviews from a nationally representative sample of 3,343 children and their families. The data collected included such data as: the age of the child at enrollment in Part C; child's ethnicity/gender; whether the family receives public assistance; the nature of the condition or delay for which the child is eligible for early intervention. These data address important questions about the children and families enrolling in early intervention, such as the average age at which children with different apparent disabilities, delays, or risk factors are enrolled in early intervention, and some of the demographic characteristics of their families.

■ Families' Perspectives on Beginning Services

Don Bailey, Robin McWilliam, Kathleen M. Hebbeler

The National Early Intervention Longitudinal Study (NEILS) is following a nationally representative sample of 3,343 children who were identified as having a disability or a condition that put them at risk for developing a disability, and who entered early intervention between the ages of birth and 31 months of age. The presentation uses data from the NEILS initial interviews with a family member (primarily mothers) shortly after the child was enrolled in early intervention. A total of 2,959 telephone interviews, each lasting about 40 minutes, were conducted. The presentation described families' perceptions of the identification and transition process into Part C programs. For example, they were asked their perceptions about the amount of time between identification of a concern and the time when the child begins services, and how helpful the services are to them. Analysis considered how the entry experience differed for families with children with different kinds of disabilities and for families from different racial/ethnic or socioeconomic backgrounds.

■ Who are the Children with Disabilities in Early Head Start Programs?

Carla Peterson, Judith Carta, Shavaun M. Wall, Kim Boller

Federal policy mandates inclusion of children with disabilities in Early Head Start programs. However, because of the early age of children served in EHS, the actual prevalence and characteristics of children with disabilities cannot be inferred from data available from traditional Head Start programs. This presentation draws on data from the 17-site Early Head Start Research Consortium, which is following a sample of more than 3,000 families, half of whom are being served by EHS programs. The study presented findings related to the characteristics of children in the program group, including a series of measures (e.g., Bayley Scales of Infant Development), as well as parent interviews about the types of services their children are receiving, including Part C program services. The data was used to explore types of delays identified in this EHS population, age of identification of delays, and needs and service profiles of families of children with identified delays. The presentation begins to answer the questions of whether children with disabilities are being served in EHS, and whether these children are also being referred for simultaneous services in Part C programs.

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■ Family and Provider Perspectives on the Experience of Collaboration Between EHS and Part C

Jean Ann Summers, Tammy Steeples, Mark Swanson, Joseph Stowitschek, Eduardo Armijo, Carla Peterson, Susan McBride, Lisa Naig, Shavaun M. Wall, Harriet Liebow

Effective collaboration between Part C early intervention services for infants and toddlers with disabilities, and Early Head Start (EHS) services for infants and toddlers from low-income families, is considered an essential component of high-quality services to children with disabilities and their families. This presentation reports a qualitative study intended to explore how state and national level policies concerning collaboration in Part C and EHS are translated at the program and family levels. The study encompassed six communities in five states, where EHS and Part C partnerships occurred. The interviews involved state and local administrators for both programs, three to five families who were dually served by EHS and Part C, and the Part C and EHS service providers directly involved with the families who were interviewed. The participants were asked how they perceived the process of collaboration at intake, evaluation, service delivery, and transition from the programs. Common themes about formal and informal processes that either impeded or facilitated collaboration were presented and discussed.

POSTER SYMPOSIUM

Early Head Start

CHAIR: Kathryn Barnard

The Early Head Start local and national research partners presented their work in progress. Themes of the posters include the relationship of family characteristics and program participation, intergenerational conflicts, collaboration of programs and researchers, correlates of parent-child interaction, language development in monolingual and bilingual families, and characteristics of the national sample.

University of Arkansas

■ Factors Associated With Intergenerational Conflict

Leanne Whiteside-Mansell, Robert H. Bradley, Mark Swanson, Richard Clubb, Joey Tan, Jana Gifford

PRESENTERS: Robert H. Bradley, Richard Clubb, Jana Gifford, Mark Swanson, Leanne Whiteside-Mansell

The quality of the relationship between young mothers and their mothers is thought to be an important factor in the quality of parenting of young mothers and outcomes for young mothers and their children. This study examined the relationships between a measure of mother-grandmother conflict, mother-grandmother characteristics, living status, and other contextual factors.

Participants were 47 pairs of mothers and grandmother figures of 15-month-old children. Mothers participating in the national evaluation of Early Head Start were asked to identify a grandmother figure with whom they had contact at least every 2 weeks and who lived within 60 miles. Mothers in this study were between the ages of 15 and 33 years (mean=21.5, *SD*=4.2). Forty-three percent (n=22) of mothers had lived with the grandmother figure at least 6 months of the last year. Most of the mothers were married (64%) and White (77%), and most indicated money was a reason for their living arrangement (69%). Most (62%) grandmother figures were the target mother's mother. The others were the target mother's grandmother (n=5), mother-in-law (n =6), or stepmother (n =1).

Child caregiving conflict and satisfaction were measured. Both women were asked to respond to 12 child caregiving tasks by indicating who usually performed the task and whom they thought should usually perform the task for the 15-month-old target child. Caregiving conflict was computed as the number of tasks for which mother and grandmother disagreed on who usually performed the task and who should perform the task (range from 0 to 24). Caregiving satisfaction was measured as the number of items for which the mother (or grandmother) identified the same person when asked who usually performed the task and who should perform the task (range from 0 to 12). Child caregiving tasks included taking the child to the doctor, washing the child's clothes, feeding the child, bathing the child, and playing games with the child.

Results indicate that mothers in this sample that had cohabitated with the grandmother figure were younger (t=2.1, p=.04) than mothers that who not lived with the grandmother figure during the last year. No differences were found between target mothers who had lived with the grandmother figure compared to noncohabitating pairs in the levels of satisfaction or conflict concerning child caregiving roles. The age of the target mother (r=.22) and the age of the grandmother figure (r=-.21) were associated with satisfaction with child caregiving roles.

In multivariate analyses, results indicate that when mother's satisfaction with her role is considered, the conflict between mother and grandmother figure's child care roles differs by residency status. When the level of grandmother figure's satisfaction with her role is considered, it is associated with the level of conflict (F=10.7, p=.002) regardless of age or residency status.

These results suggest that maternal age is not the most important indicator of the level of conflict between mothers and grandmother figures. Residency status was only important when mother's satisfaction with her child caregiving role is considered.

University of California at Los Angeles

■ Serving Latino Immigrant Families in Early Head Start

Carollee Howes, JoEllen Tullis, Claire Hamilton, Shira Rosenblatt

PRESENTER: Claire Hamilton

Children First Early Head Start in Venice, California serves primarily Latino immigrant families. The families in terms of their demographic characteristics were described. Preliminary information on pathways through their social networks in order to care for their children was presented.

(Summary not available at time of publication)

University of Colorado, Health Science Center

■ Relationship Between Participant Baseline Characteristics and Program Participation Across Two Early Head Start Sites

Jon E. Korfmacher, JoAnn Robinson, Tracey O'Brien, Robert N. Emde,
Paul Spicer, Norman Watt

PRESENTERS: Jon E. Korfmacher, JoAnn Robinson

This poster examined variables that predicted attendance in two Early Head Start programs in Denver, Colorado. The first site (Site A) provides primarily prenatal and early infancy home-visiting services to an ethnically diverse population (n=81), along with select center-based child activities. The second site (Site B) is a center-based Montessori program that provides full-day child care and developmental services to an ethnically and linguistically diverse group of infants and their families (n=75). Although a small number of families in each site began receiving program services during the prenatal period, most enrolled for the program when their child was between the ages of 2 and 12 months.

Background characteristics collected at intake into the program include: (a) sociodemographic and cultural characteristics, such as maternal age, marital status, parity, educational level, child age at entry, child gender, household density, ethnicity/race, and primary language spoken; (b) psychological resources, measured using an aggregated measure of mastery, depression, and intelligence; and (c) difficult relationship attitudes.

Attendance was measured through record-keeping systems unique to each site. At Site A, home visitors recorded participating family members and rated their emotional involvement in visits on an "engagement form" filled out at every visit. At Site B, attendance was measured by the length of time children were enrolled in the center (measuring child attendance) and the number of contacts family members had with the program through attendance at parent nights.

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special interest groups, and parent-teacher conferences (measuring family attendance).

Analyses were conducted to examine how sociodemographic and maternal personality factors predicted attendance in the two programs. Results show that there was wide variation in program use across families. In Site A, where home visiting is primarily used, mother's sense of personal mastery, difficult attitudes toward relationships, and depression were most associated with later patterns of home visiting. Women who had superficial patterns of engagement tended to have a lower sense of mastery, had difficult relationship attitudes (e.g., were reluctant to rely on others for help), and were more depressed. Women who had sporadic patterns of engagement with home visiting (low number of visits, but highly involved) tended to be less depressed, had a greater sense of mastery, and had fewer difficult attitudes toward relationships. In the center-based program (Site B), use was predicted by several family variables. Older more educated mothers made greater use of the program. Mothers with a lower sense of mastery had more contact with program staff. Children whose mothers reported more stress did not participate in the program as long.

These results are preliminary. More than ⅓ of participating children are still enrolled in the center-based program, and length of enrollment in the center is only a proxy measure of participation (the next step is examining actual attendance records). For both programs, it is important to examine individual variation in participants and their use of services as moderators of program impact.

Catholic University

The Needs and Services Use of Forty-Nine Working Poor Families in the Military: The Early Head Start Research Experience

Nancy E. Taylor, Christine A. Sabatino, Michaela L. Zaijek-Farber, Harriet Liebow, N. M. Smith, Elizabeth M. Timberlake, Shavaun M. Wall

PRESENTERS: Nancy E. Taylor, Christine A. Sabatino, Michaela L. Zaijek-Farber, Harriet Liebow, N. M. Smith, Elizabeth M. Timberlake, Shavaun M. Wall

"The military takes care of its own." This slogan, long a part of military lore, sums up a general impression that members of the military service are not needy in the same way we think of others for whom civilian social service systems have been created. The enlisted military families in this study, however, made up 38% of the families who applied to the United Cerebral Palsy Early Head Start program in Alexandria, Virginia and qualify for membership in "the working poor."

For this study, the constructs of "needs" and "wants" were used as an interpretative framework. Needs were defined as the basic resources of food, clothing, and shelter. Wants, on the other hand, go beyond basic subsistence and reflect the aspirations and expectations of individuals for a "good life" or what we have called "The American Dream." Wants were defined as financial resources, personal time, and socialization time. Data were collected on these dimensions from adaptations of the Head Start Family Information System (MPR, 1998) and social support scales developed by Dunst and Leet (1987) and Dunst, Trivette, and Deal (1988).

Data on 49 enlisted families generally reinforce the common public impression that the military meets the basic subsistence needs of most of its members. Further analysis, however, indicates these families do rely on public social services to meet basic needs. In this sample, 81% reported the use of one or more public social services to supplement their food needs. WIC was the most frequently used service (78%), followed by food stamps (12%).

In addition, there are areas in which the wants and expectations of military families are inadequately or only somewhat adequately met in this sample. Money for bills and money to save emerged as major items with 45% reporting concerns about adequate money to meet their basic bills and 74% reporting inadequate money to save. Closely related to the issue of "getting ahead" and not living a subsistence lifestyle are child care and babysitting, which would enable a spouse to work. In this sample, 49% of the military families judged child care resources to be inadequate and 35% reported inadequate babysitting resources.

Less concrete resources related to personal time and time to socialize present a more complex picture. The majority reported inadequate or only somewhat adequate personal or interpersonal time. More than half reported less than adequate personal time to rest (59.1%), to be by self (79.6%), and to stay in shape (63.2%). Furthermore, less than half reported adequate interpersonal time to be with a partner (61.3%) or with friends (71.4%), to socialize (67.3%), or to participate in their community (51%).

In summary, the data indicate that enlistment in the military does not realistically meet a soldier's financial needs, requiring the use of public social services for food supplements. In addition, family child care and babysitting needs may prevent spouses from working, and thereby providing supplemental income. Finally, the data indicate that limited personal and interpersonal time makes it difficult for these military families to "Be All You Can Be."

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Harvard University

■ Initial Characteristics and Service Needs of Rural Families With Young Children: An Assessment of Risk and Resilience

Catherine Ayoub, Barbara Alexander Pan, Valeria Rocha, Kathy Emerson

PRESENTERS: Catherine Ayoub, Barbara Alexander Pan

One way to explore the match between family/child needs and available services is to conduct a systematic assessment of the characteristics of the child, the parent, and the family. We have examined these characteristics in the context of parenting stressors, child rearing attitudes and practices, and parental health and family relationships at the time of eligibility for services in an effort to learn about the kinds of issues that impact on the quality of life for these parents and their young children.

Our main research questions are:

1. What is the range of risk and protective factors found among low-income families with young children?
2. How might these characteristics inform program goal setting and intervention planning?

Our sample consists of 146 children eligible for Early Head Start services in Windham County, Vermont, who are participating in a national evaluation of Early Head Start. Early Head Start is funded through the Head Start Bureau and is designed for low-income families with children under age 3. The young children and families in our sample are exposed to many of the risks that urban families experience; those risks are often compounded by the isolation of rural living. For example, one in five of Windham County's children live in single parent families, 19% of children live below the poverty level, 18% of mothers do not finish high school, and

Windham County has the highest rate of child abuse in Vermont. These families are predominantly White native English speakers (91%); however, participants differ both in terms of the family history of welfare dependency and in their geographical and psychological isolation. In our sample, the mean age of the parent was 25 years. The mean number of children per household was 1.7. One third (33%) of the mothers were married, more than half (55%) were single, and 12% were separated or divorced.

At the time of eligibility for entry into Early Head Start, parents were given two measures of risk and resilience: the Parenting Stress Index (PSI) and the Child Abuse Potential Questionnaire (CAP). The CAP-Inventory is a 160-item self-report questionnaire that assists in describing parenting attitudes and beliefs, provides a profile of parental psychological functioning, offers interactional indices for the relationship of the parent with the child family, and community, and specifically describes risks for potential child abuse (Milner, 1994). The PSI (Abidin, 1990) is a 101-item Likert scale that is based on the premise that the parenting experience is a function of certain salient child, parent, and situational characteristics. The measure yields child domain, parent domain, total parenting stress scores, and 15 subscale scores.

In examining the families in our sample, we found that they were a heterogeneous group when compared based on risk and resilience factors. Although the families' average scores on our risk and resilience measures were close to national norms, scores included the full range of scores on each measure. There was a sizable group of parents whose responses were at the extreme end of the scale (95%) for both high parenting stress and high child abuse potential.

Implications for goal setting and service delivery will be illustrated through examples of families from the low- and high-risk groups based on their risk and resilience scores. Programs for parents of young children should consider the heterogeneity of the population they serve. Salient risk and resilient factors can serve as beginning guides for goal setting and program planning.

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Iowa State University

■ Home Visiting: Parent and Provider Perceptions of Critical Events

Carla A. Peterson, Susan L. McBride, Rachelle G. Saceda
PRESENTERS: Carla A. Peterson, Susan L. McBride, Rachelle G. Saceda

Home visiting is historically and currently widespread as a mechanism for service delivery for both preventative programs (e.g., EHS, Parents as Teachers) and therapeutic programs (e.g., Part C; Roberts, Akers, & Behl, 1996). Despite the pervasiveness of home visiting, little empirical data are available to move us toward "second generation" research that investigates specific aspects of interventions associated with a variety of outcomes (Guralnick, 1997). There is a continuing need to "open the black box" of intervention delivered via home visits (Gomby, Culross, & Behrman, 1999). Home visiting has been considered an intervention when, in fact, it is only a location where a variety of intervention processes can occur.

This study examined the congruence of two different methods of collecting data to document intervention processes implemented during home visits conducted under the auspices of an Early Head Start program. In this EHS program, both a Child Development Specialist (CDS) and a Family Development Specialist (FDS) work with each family. Home visits are the primary mode of service delivery. Observers used the Home Visit Observation Form (HVOF; McBride & Peterson, 1997) to collect partial interval data during up to 60 minutes of each home visit. This observation system requires the observer to code three aspects of the home visit: (a) primary interactors, (b) content of the interaction, and (c) nature of the interventionist's role. While the HVOF provides a quantitative measure of activities occurring during home visits, it is possible that the time spent in a particular activity may not have the same saliency or meaning to family members or professional providers. In order to identify these "critical events," both interventionist (FDS and CDS) and family perceptions of the most important aspects of the home visit have been identified following home visits via Critical Incidents Reports (CIR).

To examine congruence between data collected via these two methods, the first step was to collapse several CIR categories to facilitate matching these data to those data collected via the HVOF. When an item was identified as a Critical Incident, by either a parent or an interventionist, there was evidence of it occurring in the observational record. Overall, rates of congruence were low between: (a) critical incidents reports collected from family members and interventionists and (b) critical incidents reports and observational data.

The field of early intervention is pursuing knowledge that will facilitate design and delivery of maximally effective interventions. Simultaneously, efforts are being undertaken to learn what types of data will facilitate an understanding of: (a) family engagement in and satisfaction with intervention activities, (b) staff effectiveness and enjoyment, and (c) positive child and family outcomes.

Documentation of the congruence between program philosophy, family characteristics and goals, and the process and content of early intervention services leads us toward "second-generation" research efforts (Guralnick, 1997), facilitating an understanding of what works for whom under what circumstances. The field of early intervention will then have scientific evidence to contribute to shaping both practice and policy guidelines.

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University of Kansas

■ Relationships Between Family Characteristics at Enrollment and Engagement and Retention in Early Head Start

Jane Atwater, Judith Carta, Jean Ann Summers, Martha Staker
PRESENTER: Jane Atwater

The purposes of this poster were: (a) to examine measures of program participation and engagement for families in Project Eagle, an urban Early Head Start program; and (b) to conduct a preliminary analysis of the relationship of family risk and protective factors at enrollment to these measures of participation.

Project EAGLE uses a dynamic and interactive system of supports to respond to the complex needs of families with infants and toddlers. A Family Support Advocate works with the family to develop an Individualized Family Support Plan and to enhance parents' knowledge and understanding of early childhood development and parenting. The Advocate develops a trusting relationship with the family, using Part C and other community resources to provide comprehensive case management services and to ensure that the family accesses all the support systems necessary to succeed. Project EAGLE's program options are responsive to individual family needs and wants. Families are eligible for either the Home-Based Model or the Combination Model of services. When a family is eligible for the combination model, the child is placed in a developmentally appropriate child care program.

The measures of family participation in Project Eagle were the following: (a) participation in home visits—the percentage of scheduled visits that were completed; (b) program retention—successful graduation from the program; and (c) parent engagement—EHS staff ratings of parent engagement during home visits, follow-through between home visits, and overall engagement across time.

The family risk and protective variables assessed at enrollment were: (a) demographic risks, such as single parent status and limited education; (b) maternal depression; (c) stressful events; (d) violent events in the neighborhood, family, and home; (e) formal and informal social support; and (f) parent's knowledge of child development.

Thus far in preliminary analyses, most measures of risk and resilience at enrollment have not been predictive of participation and engagement in the program. This may reflect the program's intensive efforts to engage high-risk families. However, mothers who had not completed high school were rated as less engaged by program staff. Mothers who did not speak English were most likely to keep scheduled visits. EHS graduation rates were lowest for families in which mothers had not completed high school and for large families. Graduation rates were highest for families in which mothers did not speak English and for ethnic minority families (with rates highest for Latino families). Thus, two factors that were assumed to represent risk (i.e., limited English proficiency and minority status) must be reconsidered and examined more closely in future analyses.

Michigan State University

■ University-Community Partnerships: One Foot in the Library and One Foot in the Street

Cynthia L. Gibbons, Mary Cunningham DeLuca, Rachel F. Schiffman, Holly Brophy-Herb, Hiram E. Fitzgerald, Marshelle Hawver, Dennis R. Keefe, Marsha A. Kreucher, Mildred A. Omar, Thomas A. Reischl
PRESENTER: Rachel F. Schiffman

In 1995, Michigan State University and Community Action Agency joined together to participate in an evaluation of low-income families as they progressed through a Michigan-based Early Head Start Program aimed at promoting health and reducing risk in children 0-3 years of age. The strong university-community partnership, coupled with input from families and other local support services, afforded unique opportunities to blend theory, research, and practice. While there were many benefits of the partnership, two of the benefits were reflected in scholarship and education outcomes.

The partnership and scholarship/education outcomes were intertwined in three major ways. First, we introduced undergraduate and graduate students into the evaluation project. Through active participation in project management, data analysis, and rather "hard hitting" data interpretation meetings, this future generation was exposed to the science and the day-to-day operations necessary to sustain the evaluation project in an intense and ever-changing community environment. Second, while the bulk of the data is forthcoming, we have presented findings and written papers, and students have completed theses. Most importantly, we are poised to leverage the resources to meet impending demands. Third, over the last 5 years, we were able to provide the leadership in answering emerging community questions, for example, about welfare reform and fatherhood.

We are proud of our evolving university-community partnership and attribute most of the success to communication, but also to trust and respect. Despite occasional difficulty, we are fortunate that the staff (e.g., home visitors, site managers, data collectors, project managers, project investigators) is invested in the dual program-evaluation mission and optimistic about the future. To illustrate, a Community Action Agency staff member and Michigan State University researcher commented: "…the program provides the mortar for families to stay together…and the research component allows us to know that we are making a difference," and "…what can be more exciting than to create new knowledge and ideas!"

University of Missouri at Columbia

■ When Program Evaluators are Also Program Improvement Consultants: Methodological, Ethical, and Logistical Challenges

Mark A. Fine, Kathy Thornburg, Jean Ispa

PRESENTERS: Kathy Thornburg, Jean Ispa

Program improvement consultants are professionals whose primary role is to provide consultation to program staff with the aim of improving how effectively the program serves its constituents. Their goal is to improve program effectiveness. Meanwhile, program evaluators are professionals whose primary role is to evaluate the extent to which the program is accomplishing its objectives and to identify the subgroups of individuals for whom the program seems most effective. Their goal is to evaluate the program without changing it through the process of conducting the evaluation.

There are advantages in assuming both roles simultaneously. Fulfilling both roles simultaneously may enhance the quality of the relationships between the researchers and program administrators/staff due to increased time spent together and more opportunities for collaborative problem solving. Furthermore, fulfilling each role provides insights that can help fulfill the other role. For example, being a program improvement consultant can provide the researcher with information on the context in which the program operates that would facilitate data analysis and interpretation. Fulfilling both roles provides a more comprehensive view of the program.

On the other hand, there are a number of challenges in assuming both roles simultaneously. In terms of methodological challenges, helping to improve the program may affect evaluation results. Intervening to change the program may compromise the integrity of the evaluation design and limit generalizability. For example, evaluation results may not generalize to programs that do not have program improvement consultants serving as their evaluators.

In terms of ethical challenges, maintaining the integrity of the research design by not informing program partners of areas of possible improvement (revealed by the evaluation) may harm program participants. Moreover, researchers/program improvement consultants may learn of some information while performing one of their roles that is meant to be confidential. Breaching the confidentiality to serve the other role raises ethical concerns.

There are also logistical challenges. It is difficult to determine how to allocate one's time between the two roles. In addition, it is difficult to determine at times which "hat" one is wearing, which can make it difficult to know how to respond.

If one anticipates that particularly challenging or severe problems are likely to occur, one might choose not to take on both roles simultaneously. If one does decide to assume both roles, one should attempt to maintain the integrity of the research design *and* make sure that program participants receive needed services. One should also attempt to make sure that program staff follow the standardized research protocol, without sacrificing the quality of the relationship between researchers and program staff.

Two illustrative cases are presented below. Details of the cases have been changed to protect the identities of the program staff and program participants who were involved.

Case 1: In the course of a research interview, a program participant tells the researcher that she was told by one of the service providers that a particular service was not available for her 3-year- old daughter. The researcher knows that this service is, in fact, available to 3-year-olds in this community and that this family would be eligible for the service. The researcher does not want to sacrifice the integrity of the research design by intervening on the child's behalf, but is concerned that the child is not receiving needed services. What should she do?

Case 2: During a program improvement consultation visit, the consultant is told by one of the program administrators that random assignment to treatment and comparison groups was not followed in a particular case. The child had multiple needs, and the program staff felt that she needed to be in the treatment group, so her name was not submitted for random assignment. What should the program improvement consultant do?

How might Case 1 be addressed? The researcher might try to find a way to make sure that the affected child receives the needed service without recommending to the program administrators that a major change be made in the program or in the way that a particular service provider performs her work. In this way, the integrity of the research design is only slightly affected, the confidentiality of the program staff person is maintained, and the child will have an opportunity to receive the needed service.

How might Case 2 be addressed? The researcher might reinforce the notion that the random assignment to groups is an essential aspect of the research design that needs to be followed for the program to have a chance of being shown to be effective. Further, the researcher might note that he or she will need to "flag" this case to see if the child and family should be excluded from the evaluation study. The researcher should inform the national evaluators, if they exist, about these circumstances.

New York University

Mother-Child Relationships: Findings From Dyadic Ratings When Children Were Six and Fourteen Months Old

Mark Spellmann, Catherine Tamis-LeMonda, Lisa Baumwell
PRESENTERS: Mark Spellmann, Catherine Tamis-LeMonda

The research questions that guided this study were:

1. Do rated dimensions of parental behavior define distinct groups of parents?
2. Are parent relationship behavior groups stable over time?
3. What child relationship behaviors are associated with parent relationship group membership?
4. What parent variables predict membership in parent groups?

Research participants were part of a program evaluation study of an Early Head Start (EHS) program in New York City. All participants were eligible for EHS, half enrolled in the program, and half were in the control group. Ratings were available on 113 dyads at baseline, when children were 6 months old, and on 84 dyads when children were 14 months old. Scale scores from survey instruments were obtained when children were 6 months old.

The following instruments were used: (a) Modernity Scale (Singh, 1983), (b) Exposure to Violence Checklist, (c) Parental Acceptance and Rejection Questionnaire (Rohner, 1984). Mothers and infants were videotaped in the home at baseline assessment when infants were 6 months old and at Time 2 when infants were 14 months old. Interactions of 15 minutes duration were coded. Two raters coded videotapes.

A number of parent-child relationship behaviors were rated. Parent behavior items included: (a) emotional responsivity, (b) sensitivity/insensitivity, (c) involvement/participation, (d) behavioral consistency, (e) language, (f) teaching, and (g) play.

Child behavior items included: (a) affect, (b) sensitivity, (c) involvement/participation, (d) behavioral consistency, (e) language, and (g) play.

Dyadic dynamics were rated by mutuality: (a) mutual enjoyment, (b) mutual communication, and (c) reciprocal interaction.

Classification analyses revealed two distinct parental relationship behavior groups when children were 6 months old: high engagement and low engagement. At 14 months, three parent groups emerged in the cluster and discriminant function analyses: (a) high engagement and high teaching, (b) medium engagement and low teaching, and (c) low engagement and low teaching. More than 90% of cases were correctly classified at both periods.

Parent groups became more differentiated over time, as parenting involved greater emphasis on language and teaching as children grew older. Group membership was strongly associated with a range of child relationship behaviors, including warmth, persistence, inventiveness, emotional regulation, language use, inventiveness with toys, sophistication of play, and cognitive development, as measured by the Bayley Scales of Infant Development (Bayley, 1969).

Maternal cluster groups were predicted by exposure to violence, traditional versus modern child rearing values, and acceptance and rejection mothers experienced from their parents in their family of origin.

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University of Pittsburgh

■ Which Families are Engaged and Why? Program and Research Perspectives on Participation in Early Head Start

Beth L. Green, Carol McAllister, Jane Dirks
PRESENTER: Carol McAllister

One key issue facing both researchers and practitioners is how to understand the factors associated with program participation in Early Head Start (EHS). Although EHS services are designed to support families with diverse needs, many families are difficult to actively engage and leave the program before they have received many services. Using both quantitative and qualitative methods, the current study addressed the frequency of low participation in services, as well as family and contextual characteristics that may be related to program engagement.

Program staff rated each family (n=101) on scales measuring families' engagement in program services. Staff rated families in terms of the following: (a) their ease of engagement in services (easy to engage, difficult to engage, very difficult to engage); and (b) their level of engagement (never involved, somewhat involved, very involved). Families' ratings were correlated with measures collected through an interview conducted at enrollment, including social support, self-efficacy, depression, coping style, sense of cultural identity, and relationship with the child's father. Eight families and their staff were also interviewed using qualitative interviews to explore issues related to participation.

Families tended to be either easy to engage (49%) and very involved (39%) or difficult to engage (32%) and never involved (35%). Further, a large percentage of families (44%) remained in the program for less than 1 year. Some 27% of families were dropped from the program because of a lack of participation. Clearly, lack of participation was a significant problem for a substantial number of families.

Correlations indicated that families who were easier to engage tended to be less able to afford things for their families (r=.29), showed a more positive coping style (r=.21) and sense of cultural identity (r=.32), were higher in social support (r=.33), and were more likely to have an involved father figure (r=.27; all correlations significant $p < .05$).

Qualitative interviews suggested that engaged families entered the program with a clear sense of their goals and a better ability to seek out support when needed. Staff also identified a group of parents who entered the program with concrete needs and who were engaged initially, but who became less engaged over time. Staff identified two key reasons for a lack of family engagement, including: (a) a lack of time due to work and school schedules, especially since the onset of welfare reform; and (b) a lack of social/emotional resources to develop relationships with program staff and other families.

Results of both quantitative and qualitative data collection suggest that "easy to engage" families are those who enter with social/emotional resources, such as existing social support networks, positive coping skills, and the ability to seek help when needed. Further, it is clear that there is a significant subgroup of parents who are difficult to engage and who are at high risk for dropping out of program services. These parents differ significantly from highly engaged parents at the time of enrollment. Both researchers and practitioners will benefit from continued work to understand the reasons why families participate and how participation influences outcomes.

Medical School of South Carolina

■ Multiple Measures of Early Head Start Program Delivery: Application to Interpretation of Participant Outcomes

Susan G. Pickrel, Richard A. Faldowski, Anita F. Kieslich, Michael J. Brondino
PRESENTER: Susan G. Pickrel

The Sumter School District Early Head Start Program currently provides a continuum of two levels, and at one time provided three levels of service for infants and their families. Comparative case illustrations of each level of service intensity were presented using collected multiple measures of program service delivery.

(Summary not available at time of publication)

Utah State University

■ Assessing the Quality of Home Visits in Early Head Start

Lori A. Roggman, Gina Cook, Sarah Thurgood
PRESENTERS: Lori A. Roggman, Gina Cook, Sarah Thurgood

As part of the program-research partnership for Bear River Early Head Start (EHS) in northern Utah, we developed a process for assessing the quality of home visits in three ways: parent ratings, program staff ratings, and research observations. The use of parent satisfaction ratings and home visitors' ratings to assess case progress has been used in other studies of home visits (Duggan et al., 1999; Heinicke et al., 1999; Korfmacher, Adam, Ogawa, & Egeland, 1997). Observer ratings of home visits were based on a modified and extended version of the Home Visit Observation Form (HVOF; McBride & Peterson, 1997). EHS parents were interviewed by researchers regarding the quality of their home visits and relationships with home visitors.

Parent ratings showed a strong positive response to home visits and home visitors, but were so positive that their ratings suggest little for program improvement. Program staff provided a separate source of information by rating the quality of home visits with each family. Staff reports of home visits and relationships with each parent were also high, but reflected a full range of quality. Staff ratings were not correlated with parent ratings of home visits and relationships, indicating that staff and parents have different perspectives. Staff ratings indicated high involvement by mothers in home visits and frequent, but not very interfering, distractions. Nevertheless, home visitors who recorded the highest average levels of distraction also recorded the lowest levels of mother engagement, suggesting that distractions sometimes interfered with mothers' interest and involvement in home visits.

Researchers observed 30 videotaped home visits (randomly selected), coded who was interacting most, and rated the engagement of the parent in the home visit and the effectiveness of the home visitor in facilitating positive parent-child interactions. Researcher ratings of home visitors' facilitation of positive parent-child interactions averaged close to the midpoint of the scale, but varied widely across individual home visitors. When facilitation was high, visits were longer and engaged both parent and child. Home visitors interacted with both parent and child for an average of 41% of the home visit, ranging from 6% to 63%, depending on the presence of other people in the home. Ratings of parent engagement on home visits averaged just above the midpoint of the scale, but also varied widely across home visitors.

These assessments of home visit quality show the success of this EHS program in meeting the program's main objective for their home visits: to engage the parent and child together. Variations across home visitors indicate specific areas where staff training and development is needed. Observational coding was an important assessment tool, but also proved to be a valuable supervisory tool, because home visitors and supervisors reviewed videotapes of home visits together to identify strengths and weaknesses and develop strategies for more effective home visiting. All of this information about the quality of EHS home visits was used to guide program improvements.

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University of Washington, School of Nursing—Children's Home Society Program

■ Associations Among Mother's Psychosocial Resources, Parent-Child Interaction, and Child Language Outcomes for Mothers and Toddlers in Poverty

Susan J. Spieker, JoAnne L. Robinson, Colleen E. Huebner, Chintana Wacharasin, Sandra Jolley, Sandra Caldwell, Anthippy Petras
PRESENTER: Susan J. Spieker

The development of language in the first years of life occurs in a caregiving context that provides experiences in rhythmic, communicative interactions that include both informal language stimulation and direct teaching of words and expressions. Comparatively few studies have examined variation within social class groups to identify the mechanism by which low socioeconomic status leads to language problems for some children in poverty, but not for others. In this analysis of comparison group families involved in the Early Head Start National Research and Evaluation Study, associations were examined among mothers' psychosocial resources at enrollment, the quality of parent-child interaction at 14 months (with particular attention to mothers' verbal expressiveness toward the child and child disengagement cues), and child language skill at 30 months of age. The sample consisted of 119 families in the National Early Head Start Evaluation who had been randomly assigned to the comparison group (control group).

A correlational study design was utilized to compare the variables. The variables measured at enrollment were: (a) mothers' depressive symptomology (CES-D; Radloff, 1977), (b) maternal self-efficacy (Pearlin, Leiberman, Menaghan, & Mullan, 1981), and (c) maternal verbal ability (WAIS Vocabulary subscale, Wechsler, 1981). Mother-child interaction was measured at the 14-month home visit with the NCAST Teaching Scale (Sumner & Spietz, 1994). Three new NCATS subscales were created for this study: (a) Mother Verbal Expressiveness, (b) Child Responsiveness, and (c) Child Disengagement. Child expressive and receptive language was measured at age 30 months with the Preschool Language Scale–3 (PLS-3; Zimmerman, Steiner, & Pond, 1992).

Mothers with fewer depressive symptoms reported greater self-efficacy and tended to have higher verbal ability. Mothers with higher verbal ability had infants with better language skills. Mothers who had higher Verbal Expressiveness with their infants had more responsive children, but Child Responsiveness was unrelated to child language skills. Controlling for the effects of mothers' verbal ability and self-efficacy, Mother Verbal Expressiveness related positively and Child Disengagement related negatively to child language ability at 30 months.

Among children who showed less disengagement during mother-child interaction, having a verbally expressive mother improved language skills considerably. However, when children showed high disengagement, mothers' verbal expressiveness with them had no impact on their language skills; language outcomes were generally low for children with greater disengagement. The foundational skills for early language comprehension and expression include the child's ability to effectively maintain interactive exchanges with a caregiver. These skills are promoted in an emotionally available relationship where maternal sensitivity and child responsiveness are high. While disengagement cues are important communicative signals that infants use to regulate interactions, their frequent appearance during brief interactions suggests a dyad having difficulty maintaining interactive exchange. Opportunities for language learning are lost when the dyad is not mutually engaged. Future analyses of the EHS intervention group, in which mothers received skills training to improve their ability to monitor infant cues and respond appropriately and contingently, will be conducted to determine if child disengagement was lower and child language skills enhanced in that group.

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University of Washington—Migrant Program

■ Analysis of Children's Language and Social Skills Development in Bilingual and Monolingual Spanish Migrant and Rural Hispanic Farmworker Families

Joseph J. Stowitschek, Eduardo J. Armijo

PRESENTER: Eduardo J. Armijo

This study focused on how migrant and rural Hispanic farmworker families help their children acquire language and social skills. The primary question addressed was: In what ways do disadvantaged, rural Hispanic families attempt to or contribute to the use of language and social interaction skills by infants and toddlers? Findings on communicative characteristics found among bilingual and monolingual Spanish families were presented. Language data were generated through 10-minute videotaped vignettes of children and adults/peers engaged in instances of "freeplay." Social interaction data were generated from a 10-minute observation protocol, where instances and types of interaction were recorded at 10-second intervals. Data were collected when the target children were 14 months of age.

The sample included families who were eligible to participate in an Early Head Start program. Family demographics from the sample were as follows: (a) more than 95% of the families were Hispanic; (b) nearly half (47%) were single parents; (c) 63% of the families were monolingual Spanish; (d) only 16% had full-time employment, with 59% of the families considering themselves as only seasonally employed or fully unemployed; (e) only 8% were high school graduates, with 38% having made it through the 8th grade; and (f) mean income was less than $9,500 per year.

Findings included: (a) a higher number of intelligible words spoken and actions were taken by adults/peers from bilingual families as compared to their monolingual Spanish counterparts (414 vs. 353); b) a slightly higher number of words/utterances and actions were made by targeted children from monolingual Spanish families as compared to targeted bilingual children (66 vs. 63); (c) a higher number of verbal and social initiations were made by monolingual Spanish adults/peers than bilingual adults/peers (48 vs. 34), with nearly comparable response rates by targeted children (41% vs. 44%); (d) a nearly comparable number of verbal and social initiations were made by targeted children from monolingual Spanish and bilingual families (9 and 8, respectively), with a higher response rate by adults/peers from bilingual families (75% vs. 56%); and (e) there was a higher percentage of continuous activities between targeted children and adults/peers from bilingual families (57% vs. 48%).

National Study

■ Research on Early Head Start Implementation: Approaches to Ensuring Child Care Quality

Ellen Kisker, Diane Paulsell, Helen Raikes, John Love

PRESENTERS: Helen Raikes, John Love

Based on the Early Head Start implementation study, this presentation highlights strategies of 17 research sites to ensure child care quality and reports observed quality of child care in Early Head Start. The data were collected during the first 3 years that Early Head Start research programs served program families through site visits and observations of child care settings.

As programs became more fully implemented, more programs addressed the child care needs of families. For example, at the time of funding, 5 programs offered a mixture of home and center-based services to children and families, and by 1999, 11 programs offered this mixture of services. Early Head Start programs are responsible for ensuring that child care arrangements used by Early Head Start families comply with the revised Head Start Program Performance Standards, whether they provide care directly or in partnerships with community programs. The majority of Early Head Start children were in some form of child care in 1999—30% in Early Head Start centers, 17% in community center-based or home-based care referred by the EHS staff, and 15% in care selected independently of the EHS program. Programs helped to facilitate use of child care subsidies—11 programs helped families apply for subsidies, 4 programs used subsidies to help fund Early Head Start child care centers, and 10 programs implemented strategies to prevent interruptions in care.

Data from the Infant/Toddler Environment Rating Scale (ITERS; Harms, Cryer, & Clifford, 1990) showed that quality was good in 9 programs providing care directly through Early Head Start centers. Quality averaged 5.3 in both 1997 and 1999. Ratios and group sizes also were good. Child staff ratios in Early Head Start center-based care averaged around one teacher per three children, and average group size was less than 6. Nearly 80% of all teachers in Early Head Start centers had a CDA or higher degree; staff turnover averaged 40%. The quality of community child care that some Early Head Start children attended was not as good. In 1997, the ITERS average for community child care was 3.7 and in 1999, it was slightly higher at 4.5. Staff-child ratios were slightly more than one to four, and group sizes averaged around 9 at each observation period. Ratios and group size in community family child care homes attended by some Early Head Start children were good. Ratios averaged around 3.5 children per teacher and group sizes averaged less than 5. Quality of care as assessed by the Family Day Care Environment Rating Scale (Harms & Clifford, 1989) averaged 3.4 in 1997, and 3.5 in 1999.

Programs employed a number of strategies to improve the quality of community care that Early Head Start children attended: (a) providing training for community child care providers and teachers, (b) forming partnerships with providers including a commitment to meet the Head Start Performance Standards, (c) seeking additional funding for community partners, (d) making regular visits to community child care providers, and (e) participating in community collaborative efforts to increase the availability of good quality care.

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Fathers and Early Child Development: Lessons Learned from Fathers' Stories

CO-CHAIRS: Hiram E. Fitzgerald, Natasha Cabrera
DISCUSSANT: Mary Cunningham DeLuca, Ronald Mincy
PRESENTERS: Carol L. McAllister, Jean Ann Summers, Gina U. Barclay-McLaughlin

Attempts to uncover key etiologic factors regulating the organization of intraindividual, interpersonal, and person-environment characteristics have forced investigators to look beyond the parent-infant dyad for causal mechanisms. On the threshold of the 21st century, the impact of this paradigmatic change is dampened by the fact that the bulk of the knowledge base concerning child development is knowledge of mother-child relationships. Knowledge of the father's impact on child development is limited, with data often derived from maternal reports of the father's behavior or focused on comparisons of fathers and mothers rather than on the father per se. What seems most clearly documented about the father's role in child development is the way in which it has been defined during the past 400-600 years, particularly in Western industrialized societies (Engle & Breaux, 1998; Lamb, 1987). According to Lamb, four roles that have emerged historically to characterize fathers' function in family life—disciplinarian, breadwinner, sex-role socializer, and nurturer—emerged in response to social-cultural changes over the past 400 years and have aggregated into (at the least) a four-fold definition. Although the roles may aggregate, it does not follow that they are of equal weight (Lamb, Pleck, Charnov, & Levine, 1987).

Fitzgerald, Mann, and Barratt (1999) suggest six themes that not only are descriptive of contemporary research with fathers, but also represent an agenda for guiding research and clinical studies of fathers: (a) focus on direct assessment of fathers' parenting behavior, rather than relying on maternal reports; (b) focus on the effects of father presence on early child development, rather than the effects of father absence; (c) focus on individual differences among fathers, including within-culture and cross-cultural determinants of fathering and their impact on child outcomes; (d) focus on the father's role in gender socialization; (e) focus on conceptualizing family as more than a dyad, regardless of whether a biological or social father is part of the family unit; and (f) focus on inclusion of fathers in psychotherapeutic interventions involving families with infants and young children. This symposium addresses several of these themes, building from the first: directly assessing fathers' perspectives on their role as parent during the first few years of their child's life.

McAllister and her colleagues address issues related to enhancing father involvement in Early Head Start and track the evolution of strategies that move from occasional special event methods to involve fathers to strategies that treat fathers as equal coparents. Summers and her colleagues focus on fathers' perceptions of supports and support needs in relation to their role as fathers and their involvement in Early Head Start. Barclay-McLaughlin focuses on themes that have emerged from qualitative interviews of Early Head Start program staff apropos of father involvement, with special emphasis on successful approaches as well as barriers to success. Finally, DeLuca reflects on the implications of these preliminary findings for programs, and Mincy offers perspectives from the vantage point of a funder. The symposium, therefore, links research, practice, and policy in our collective effort to understand the role of fathers in early child development.

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■ From Sports Fans to Nurturers: A Pilot Study of EHS Program Efforts to Involve Fathers

Carol L. McAllister, Laurie Mulvery, James Butler

The Pittsburgh Early Head Start program served as the pilot site for a practitioner's study that explored the ways EHS programs include and work with fathers of young children to support a father's own involvement and engagement with his child(ren) and family. This exploratory research consisted of a number of qualitative methods that allowed for the triangulation of findings into a comprehensive case study of father involvement strategies in an early childhood program. The methods included: (a) focus groups with program staff and the program's parent policy council, (b) qualitative interviews of home-visiting staff about their work with specific families related to father involvement, and (c) participant observations of special father involvement activities.

Preliminary findings indicate that this early childhood program has undergone a significant evolution in its thinking and practice in terms of father involvement. From the early days when the focus was on the mother-child dyad, through a series of attempts to involve fathers by offering special male activities (especially sports-related), the program has now developed a perspective that views fathers fully as coparents and aims to recruit the whole family, offer the same services to fathers and mothers, and encourage fathers to be actively involved in home visits and center-based activities. Special groups and activities for fathers may support such efforts toward inclusiveness, but these are seen as extras and not as the sole or primary services for men. This suggests that father involvement, on the part of early childhood programs, may develop through specific stages.

A parallel evolution has occurred in terms of staff perceptions of the core activities of fatherhood—away from a focus on job seeking toward a more integrated view of nurturing that includes economic provision but also highlights emotional engagement with children and other family members. It is interesting that this evolution reflects what EHS fathers themselves told researcher about their roles. In responding to open-ended interview questions, their own definition of a "good father" focused on emotional involvement and everyday parenting activities as much as on providing financially for their children.

Another preliminary finding of our pilot study concerns the critical nature of relationships between mothers and fathers to effective father involvement. For example, many EHS staff members defined good fathering as "being there" for the child's mother, as well as for the child, to support and reinforce the mother's parenting efforts. At the same time, mothers were identified as gatekeepers, in both positive and negative ways, for father involvement. There was considerable discussion about the need to help mothers understand the importance of fathers in their children's lives.

Staff identified several barriers in their attempts to effectively involve fathers. These included: (a) relationship issues within the family; (b) reluctance on the part of EHS parents to share information that could jeopardize welfare, public housing, and other government subsidies; (c) economic realities, especially lack of adequate employment opportunities in the local area; (d) images from the media and popular culture that undermine men's confidence in their value as fathers; and (e) historical paradigms and policy orientations that target mothers and children, to the exclusion of fathers, in social service and child development programs. Interviews with home-visiting staff about their work with specific families reveal some of the strategies used to overcome such barriers, resulting in more successful father involvement.

Father's Perceptions About Support Needs and Services

Jean Ann Summers, Helen Raikes, Kimberly Boller, Welmoet van Kammen, Laurie Mulvery, Barbara Greenstein

The Early Head Start Research Consortium Father Studies Work Group is conducting a comprehensive nationwide study of fathers of low-income families. The work consists of extensive measures on a variety of variables related to these men's attitudes, resources, and expectations for their roles as fathers. Data are being collected on more than 500 fathers at the time their child is age 24 months and again at age 36 months. The study includes quantitative measures, videotaped samples of fathers interacting with their children, and a series of open-ended, qualitative questions. This paper reports preliminary results from the 24-month interviews, utilizing both quantitative and qualitative information related to fathers' perceptions about their needs for support and available resources for that help.

Quantitative methods include a descriptive analysis of fathers' responses to one section of the 24-month interview protocol, probing fathers' participation in any programs, parenting information or training, or support activities. These data will provide a profile of the types of programs fathers were aware of and utilizing at the time of the interviews.

Qualitatively, transcripts from the open-ended interviews are being analyzed in two ways. First, members of the Father Studies Work Group have formed subgroups to conduct thematic analyses of samples of the transcripts to identify patterns, trends, and insights related to several subgroup topics. The authors of this paper form the subgroup focusing on fathers' perceptions of support needs and services. The subgroup members will independently review about 50 sample transcripts and then meet via conference call to reach consensus about identified patterns and themes. Second, input from the subgroup will be utilized to develop a framework for coding transcripts using qualitative analytic software (NUD*IST) to help group comments across the identified themes, generate subcategories, and explore crosscutting patterns that may emerge in the data. Approximately 400 transcripts will be analyzed utilizing this method. The subgroup members will, in turn, review and comment on the generated codes and analyses.

Early analyses suggest a number of issues about fathers' perceptions of supports and support needs that have important implications for Early Head Start services. First, many fathers appear to perceive that they have no supports, nor do they want any, to do their job as fathers. They may be reacting to the questions about support needs as a threat or suggestion that they are less than responsible. Alternatively, the assertion of no needs for support may be more of a statement of determination to "be there" for their child regardless of challenges. Furthermore, while fathers appear to welcome supports offered by informal resources (extended family, wife or partner, friends, church, etc.), many of them appear to feel ambivalent about the more formal community resources offered. For some, there is a suspicion about intrusion into family privacy or past negative experiences that make them reluctant to seek help. An opposing set of respondents, however, do describe receiving helpful supports from a variety of community resources, including Early Head Start programs. These fathers seem to perceive programs as helpful when they provide concrete assistance or information, present opportunities for whole-family activities, or provide occasions for fathers to meet with other fathers. The question the analytic subgroup will explore is whether there are specific attributes of fathers with positive experiences or of the support they received that might inform us about strategies to reassure fathers with more ambivalent attitudes toward support.

A second avenue for analyzing possible support needs will focus on fathers' statements about their goals and aspiration for their children. Preliminary findings suggest that fathers expect their children to show growth in language, motor skills, and self-help as they age toward kindergarten. In addition, many fathers have expectations for children's behavior, social skills, and the acquisition of values, such as kindness, work ethic, and honesty. Despite these rather clear expectations, however, most of the respondents analyzed thus far seem to have little idea of what specifically they might do to facilitate their goals for their child. A more in-depth understanding of fathers' goals for their children may suggest areas for concrete strategies and parenting ideas, which fathers may welcome in order to become more instrumental in their children's lives.

■ Working With Early Head Start Programs to Increase Father Involvement

Gina Barlcay-McLaughlin

Attention to fatherhood has stimulated the interest of intervention programs across the country, especially among programs designed to support healthy child development and learning. Growing interest in fatherhood and the role fathers play in supporting healthy development has led many programs to examine the extent to which they involve fathers and the nature of father involvement. Although Head Start is a known leader in parent involvement and has historically welcomed all parents to take an active role in the program, emerging findings from our qualitative work suggest that Head Start programs, similar to other child development and child care programs, have been more mother oriented. In recent years, however, Head Start and the newly evolving Early Head Start programs have given increased focus to the role fathers play in early development and learning and the role programs play in facilitating increased quality parent involvement in the program and with their children.

For more than 2 years, the Consortium, a group of 17 Early Head Start programs across the country and their university-based research partners, has been working to examine program support for father involvement. This collective effort has contributed to an increased awareness and understanding of father involvement and the ways participating Early Head Start programs think about and support increased parent involvement: fathers and mothers supporting their children. This paper is designed to share qualitative findings from our study of these Early Head Start programs and emerging lessons as programs attempt to increase fathers' involvement in the program and with their children. It is designed to provide a sense of the range of ways programs involve fathers, mechanisms and strategies that programs identify with successful father involvement, the nature and extent of father involvement, and barriers to working with fathers with a range of needs. We will present some of the critical themes emerging from our findings as we probe how programs plan for and support increased father involvement. Among these themes are the following:

1. Stages of program development. Program staff led us to theorize that there are stages of program development. Programs seem to be able to say whether they are in the beginning stages, an intermediate stage, or an advanced stage of development of program features related to father involvement. The father-related programming seems to change with each stage. From our qualitative work, we are learning more about how programs in the early, middle, and advanced stages of program development approach father involvement, how many programs are at each stage, and what catalyzes their change from one stage to the next. We are also learning how staff members view fathers at each stage and how their evolving understanding of fathers and their attempts to increase father involvement in the programs influence the ways they plan for and support involvement of both parents.

Emerging findings suggest that what is characterized as a success, barrier, or failure will look different at each stage in the process of supporting and increasing father involvement.

2. Old hurts, disappointments, loss, and defensiveness. In our qualitative work, we have learned that many fathers (as well as mothers) have been disappointed by their own fathers. Furthermore, they feel they have been treated badly by educational and social institutions. We are learning how this history influences relationships between parents, children, and the institutions designed to support them. In our investigation, we are interested in whether and how programs have worked at building trust that would allow fathers and mothers to utilize support for developing a true coparenting relationship.
3. When fathers are abusive or otherwise not a good influence for the child. While we are learning that the vast majority of fathers want to be involved with their children, there are some who are either abusive to the mother, the child, or both. We want to learn how programs make the judgment call as to which fathers they pursue to encourage involvement and which fathers they do not. We want to learn how these decisions are made and whether help is extended to the father even if family members discourage his involvement.
4. Nonresidential fathers of all kinds. Emerging findings seem to suggest that programs are much more successful with residential fathers. Yet, we believe there are nonresidential fathers who want to be or should be involved in their child's life. These include fathers in prison as well as fathers who do or do not pay child support. In our investigation, we seek to learn more about how to encourage these fathers to become involved in the program and in their child's life.
5. Working with mothers to encourage fathers. The literature shows that mothers are often the ticket to father involvement. Thus, we seek to understand the extent to which programs work through mothers to draw fathers into the program and further into the child's life. Are they able to catalyze on this gatekeeping function? Or are they conflicted because of their perceptions of the mothers' wishes?
6. Novel and successful program practices. We are learning that programs all over the country are developing ingenious ways to reach out to fathers. From support groups to basketball tournaments to partnerships with football players, the creative spirit is leading this new work. Our work examines what successful programs are doing.
7. Changes in parenting versus changes in parents: Fathers and theories of change. Some of the fathers in our focus groups say they are better fathers because of Early Head Start. Others say, more vaguely, that they are involved in Early Head Start because they want to "do anything for my child," but they might not tie that involvement to changes in their own behaviors. We are learning about theories that guide some programs to target the father as parent and others to target the father as a person. Our work seeks to understand these different approaches to working with fathers.

POSTERS

Biobehavioral Approaches to Development

Intervention for Premature Infants With Central Nervous System Injuries

Rosemary C. White-Traut, Michael N. Nelson, Jean Silvestri, Ushanalini Vasan, Susan Littau

PRESENTER: Rosemary C. White-Traut

Our specific aims were to: (a) evaluate preterm infants' immediate physiologic and behavioral responses to a multisensory intervention, (b) describe and compare the experimental and control group infants' neuromotor and mental development during the 1st year of life, and (c) compare maternal-infant interaction between experimental and control groups. This study of 39 medically stable, premature infants took place in the NICU of a level III medical center from 1992–1996. Infants diagnosed with PVL or Grade III/IV IVH were eligible at 32-weeks gestation. A cohort of VLBW infants (born between 23-26-weeks gestation) with normal neurosonograms was also recruited at 32-weeks gestation. Infants were randomly assigned to a control (Group C) or experimental group (Group E). Group C infants received routine nursery care; no additional stimulation was provided. Group E infants received 15 minutes of ATVV (auditory, tactile, visual, and vestibular) intervention, twice daily, 5 days per week, for 4 weeks or until discharge to home. Prior to discharge, the Group E infants' mothers were trained to reliability to continue the ATVV intervention at home until the infant reached 2-months corrected age. The ATVV progressed dependent on the infant's positive and negative behavioral cues. Investigators blind to group assignment obtained all dependent measures. Equivalency of the groups' health was documented at enrollment. Immediate outcome measures included heart and respiratory rates, hemoglobin oxygen saturation, and behavioral state (HR, RR, SaO_2, BS). Feeding progression data (from full gavage to full nipple feeds) were obtained from the medical record. During the outpatient visits at term, 2-, 4-, 8-, and 12-months corrected age, Bayley II Scores, developmental milestones, and mother-infant interaction were assessed. Physiologic means remained within the normal limits for infants of these gestational ages. Differences existed between Groups C & E on the percentage of alertness ($p < 0.01$). There was also a difference in the percentage of alertness by week enrolled in the study ($p < 0.01$). Infants in Group E who alerted the most in response to ATVV intervention had the shortest hospital stays ($r = -0.48$; $p = .037$). Both PVL & IVH infants in Group C had a mean of 12 in-patient study days longer than counterpart Group E infants ($p = .014$). Group C infants averaged significantly longer to progress from gavage to nipple feeding (16 vs. 12 days). The proportion of nippled intake to gavage intake was significantly larger for Group E ($p = .04$). In general Bayley II scores were low, as expected for this extremely high-risk group of infants. The experimental group had a 23% lower incidence of Cerebral Palsy (CP) and had a 10 to 13-point higher score on the Bayley II. No significant differences have been identified between Groups C & E for mother-infant interaction.

In summary, strong alerting to the ATVV procedure is a predictor of rapid clinical improvement and associated early discharge. The trend toward improvement in mental and motor performance and the lower incidence of CP at 1 year suggests the need for a larger sample to document the long-term impact of ATVV intervention.

Acknowledgement

This research was supported by the National Institutes of Health, National Institute of Nursing Research, Grant #1R01 NR2328-01A2; the Hewlett-Packard Company, Grant #13580; the Alcoa Foundation; the Harris Foundation; Gould Instruments; and the Campus Research Board, the University of Illinois at Chicago.

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Dermatoglyphic Fluctuating Asymmetry and Neuropsychological Functioning in Preschool Children

Amy West, Jim Reilly, Sonia Patil, Denise Newman

PRESENTERS: Amy West, Sonia Patil

Paired structures in the body, such as the right and left hands, should be approximate "mirror images" of each other. The degree to which differences are observed within an individual in such paired traits can serve as a marker of developmental disturbance. Fluctuating asymmetry, the unsigned difference between the right and left sides of a bilateral trait within an individual is a quantitative index of developmental instability, with greater fluctuating implicating greater developmental disturbance (Palmer & Strobeck, 1986; Naugler & Ludman, 1996a).

Dermatoglyphics, the epidermal ridges and patterns of the hand, can serve as early markers of developmental integrity. Greater dermatoglyphic fluctuating asymmetry has been reported in disorders of developmental origin including Down's syndrome, Fragile X, fetal alcohol syndrome, and schizophrenia (Naugler & Ludman, 1996b). Given the association between dermatoglyphic traits and the developing central nervous system (CNS), this analysis explored fluctuating asymmetry in dermatoglyphic patterns as an indicator or correlate of neuropsychological functioning in preschool children.

A sample of 41 children and their parents were recruited from local Head Start, day care, and preschool programs. The children ranged in age from 3–5 years old and represented diverse racial and socioeconomic categories. They were invited for a single laboratory-based assessment. The finger and palm prints of both the left and right hands were taken and classified as arches, loops, or whorls. The number of discordant patterns between homologous fingers on the right and left hand were calculated. This pattern discordance score served as a measure of dermatoglyphic fluctuating asymmetry. While in the lab, the child also underwent a series of neuropsychological tests assessing attention, language development, visual-motor integration, visual-spatial ability, and memory using the NEPSY: A Developmental Neuropsychological Assessment (Korkman, Kirk, & Kemp, 1998).

Results indicated that dermatoglyphic fluctuating asymmetry predicted performance on certain domains of the neuropsychological testing. Mean scores for the children with one or fewer discordant patterns were higher in two of the five domains: the visuospatial core domain and the sensorimotor core domain. Sensorimotor skills involve the coordination of multiple systems that mediate the production of speech, smooth and efficient limb and whole body movements, and dexterous movements of the hands and fingers. Visuospatial processing involves the ability to synthesize elements into a meaningful whole, represent objects mentally, discriminate between objects, and solve nonverbal problems.

What makes the identification of fluctuating asymmetry of dermatoglyphic patterns so compelling is its potential as a very early risk marker for later developmental problems. Impairments in sensorimotor and visuospatial functioning have been found to be associated with various learning and other developmental disorders. Fluctuating asymmetry, as a marker for developmental instability, can be used to help identify children at higher risk, enabling early intervention, as well as facilitating research on the etiology of certain developmental disorders, by allowing researchers to identify and follow at-risk children from birth. Clearly the identification of children at risk for developmental delay or disorders is paramount for implementing effective intervention programs.

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Stress Physiology at Child Care: Links Between Cortisol and Age, Type of Care, and Temperament

Sarah K. Lane, Kathryn A. Tout, Andrea C. Dettling, Anne M. Sebanc, Megan R. Gunnar

PRESENTERS: Sarah K. Lane, Kathryn A. Tout, Anne M. Sebanc

The human body produces the hormone cortisol to help regulate daily functioning and cope with challenge. In response to challenge, the body may elevate cortisol. This signals the body to make energy available, to reduce inflammation, and to focus attention. These are necessary and adaptive functions. However, under conditions of constant challenge, or repeated high-level challenge, the continuous elevation of cortisol may have damaging effects, such as inhibition of growth and restoration, and immune system suppression.

Under normal circumstances adults and older children show a pattern of decreasing cortisol across the day. Here we present a series of studies with preschoolers who attend full-day, center-based care. Although these children show the expected pattern of decreasing cortisol at home, many show rising cortisol over the day at child care. In our attempts to understand this initially unexpected finding, we have conducted a program of research exploring this contextual difference. We have replicated the study several times, examined differences in this pattern for children at center-based and family-based child care, studied whether school-age as well as preschool-age children show this pattern, examined the role of napping at child care, and examined the role of temperament differences in producing the effect.

In our initial study, a higher percentage of the children in the center-rated "good" versus the center-rated "excellent" showed a rise in cortisol over the day, indicating that the rise may be linked to quality (Tout, de Haan, Kipp-Campbell, & Gunnar, 1998). Higher quality, family-based child cares were also less likely to have children who exhibited a rise over the day (Dettling, Parker, Lane, Sebanc, & Gunnar, 2000; NICHD, 1996). In addition, it appears that fewer children in high-quality family child care than in high-quality center child care exhibit an afternoon rise (Dettling, Parker et al.,2000).

For preschoolers at child care, challenge may come in the form of negotiating social relationships with peers and caregivers (Gunnar, Tout, de Haan, Pierce, & Stansbury, 1997). If this is true, we should expect children who have higher social skills to show less of an elevation. Indeed, older children (5–8) do less frequently show a rise in cortisol at child care (Dettling, Gunnar, & Donzella, 1999). Also, children rated by peers as disliked are more likely to show elevations in cortisol and to be rated by teachers as low in positive interaction skills (Sebanc, Tout, Donzella, & Gunnar, under review). Third, nearly all children show a slight drop in cortisol over the rest period when interactions are limited, although the drop does not seem to be related to sleeping versus resting (Lane, Sebanc, & Gunnar, 2000).

In conclusion, although continual slight elevations in cortisol may dampen immune function, all the levels observed at the moderate- to excellent-quality child cares in our studies are within the normal range. However, we do not know what levels of cortisol are produced in poor-quality settings. Our data suggest that child care settings challenge the activity of the young child's system and point to the need to determine the activity of stress-sensitive physiological systems in settings that span the range of child care quality.

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Cerebral Specialization for Language Comprehension in Bilingual Toddlers

Barbara T. Conboy, Debra L. Mills

PRESENTER: Barbara T. Conboy

An important issue in developmental psycholinguistics concerns the role of language experience in establishing specialized neural systems for language processing. In the present research, this question was addressed by examining the neural activity associated with word processing in 20-22-month-old children acquiring two languages simultaneously. Since bilingual children typically have different levels of experience with each language, it was hypothesized that different patterns of processing would be linked to each child's dominant versus nondominant language.

Event-related potentials (ERPs) were used to examine the timing, amplitude, and distribution of the neural activity linked to processing words children comprehended versus words they did not. Previous research using ERPs with monolingual toddlers indicated larger amplitudes of negative activity to known versus unknown words (Mills, Coffey-Corina, & Neville, 1993, 1997). Thus, increased negativity appears to index language processing related to word comprehension. Furthermore, ERP known-unknown word differences were more focally distributed in children with larger vocabularies (Mills et al., 1993, 1997). In the present study, ERP known-unknown word differences were compared across languages to determine whether a more focalized pattern was linked to vocabulary size. The sample consisted of 29 children who had regular exposure to English and Spanish beginning in the 1st year of life, and included children recruited from Head Start programs as well as the larger bilingual community. Each child was tested with an individualized word list developed using parent reports and a picture-pointing task. Language dominance was determined using 3-point parent rating scales and the number of words produced as reported on English and Spanish versions of the MacArthur Communicative Development Inventories (Fenson et al., 1993; Jackson-Maldonado, Thal, Marchman, Bates, & Guitierrez-Clellen, 1993). Mean amplitude measurements were submitted to mixed analysis of variance with language (dominant vs. nondominant), word type (known vs. unknown), hemisphere, and electrode site (frontal, anterior-temporal, temporal, and parietal) as within-subject variables. Between-subject comparisons examined the effects of overall vocabulary development on these patterns of neural activity. Following Pearson et al., (1994, 1995) "total conceptual vocabulary" (TCV) size was computed by summing the English and Spanish words produced and subtracting translation equivalents. A median split on this score was used to classify children as "lower" versus "higher" producers.

As predicted, results indicated language-specific ERP patterns. In the nondominant language, known-unknown word differences at 600-1200 milliseconds (msec) were broadly distributed across electrode sites over both hemispheres. In the dominant language, these differences were more focally distributed. Earlier differences (200–400 msec) were found only for words in the dominant language, at right frontal and anterior-temporal sites. Results also indicated that overall vocabulary size had an effect on the timing of these differences. The early (200–400 msec) differences were found only in the dominant language of the higher producers, but were not evident in the lower producers. The later differences were distributed differently in the higher versus lower producers. These results with bilingual toddlers underscore the role of experience in establishing the organization of language processing systems during the early stages of primary language acquisition.

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Behavioral State and Pulse Rate Correlates in Infants Prenatally Exposed to Illicit Substances

Rosemary C. White-Traut, Terrence Studer, Patricia Meleedy-Rey, James Kahn, Susan Littau

PRESENTER: Rosemary White-Traut

The objectives of this study were: (a) to identify behavioral and physiologic responses of infants prenatally exposed to illicit drugs to a multisensory intervention and compare these responses to nondrug-exposed infants, and (b) to determine whether prenatally drug-exposed infants would have a positive correlation between infant behavioral state (IBS) and pulse rate (PR).

The study was conducted at a level III medical center from 1995–1998. The convenience sample consisted of 45 prenatally drug-exposed and 72 nondrug-exposed, full-term, clinically stable infants. Infants were categorized into cocaine, opiate (heroin and/or methadone), or poly-drug exposure groups based on maternal report and/or urine toxicology results. Infants were not eligible if they were experiencing active drug withdrawal. Infants were randomly assigned to a control (Group C) or experimental group (Group E). Group C infants received routine nursery care; no additional stimulation was provided. Group E infants received 15 minutes of ATVV (auditory, tactile, visual, and vestibular) intervention, twice within 12 hours starting 24 hours postdelivery. The ATVV progressed dependent on the infant's positive and negative behavioral cues. The nondrug and drug-abusing mothers were similar in age, race, number of living children, prenatal weight gain, prenatal care, and income level. Trends in drug use frequency suggested no overt decrease in drug use across trimesters. Drug-exposed infants were significantly different from nondrug-exposed infants in head circumference ($p = .014$) but no significant differences were found for other demographic variables. Pulse rate (PR) was continuously recorded throughout each session. IBSs were hand recorded during the 50-minute session. Frequency of IBS was converted to percent distribution over three summary state categories. The distribution of IBS was significantly different between Groups C and E for both the nondrug-exposed ($p < .000$) and drug-exposed infants ($p < .000$). Both nondrug-exposed and drug-exposed infants in Group E responded to the ATVV with more alertness during the intervention when compared with Group C infants. Group C drug-exposed infants had more active sleep and less alertness in each time period than the nondrug-exposed controls. Of note was the significantly different distribution of IBS between Group C infant groups (drug-exposed and nondrug-exposed infants) for all three state categories ($p = .021$). Significant differences were not found between the drug-exposed and nondrug-exposed experimental groups. Bivariate correlations conducted on the nondrug-exposed infants yielded significant correlations between

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PR and IBS for both Group C ($r = .938$; $p = .006$) and Group E ($r = .979$; $p = .001$). A significant correlation was identified for Group E drug-exposed infants ($r = .955$; $p = .003$) but not for Group C drug-exposed infants. When correlations were conducted by drug exposure, results identified a nonsignificant positive correlation on opiate exposed infants ($r = .664$; $p = .073$) and a significant correlation for polydrug exposed infants ($r = .584$; $p = .046$). A significant correlation was found for infants exposed to cocaine in Group E ($r = .992$; $p < .000$).

These results suggest that the ATVV may be effective in integrating and organizing drug-exposed infants' behavioral state and autonomic function to approximate that of nondrug-exposed infants, and that cocaine exposed infants may benefit the most from the ATVV.

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Child and Family Strengths and Resiliency

How Parents Play: Their Childhood Play Memories and Current Family Photos

Susan J. Welteroth, James E. Johnson

PRESENTERS: Susan J. Welteroth, James E. Johnson

Play influences all areas of children's growth and development and can be a primary means of promoting language and cognitive skills (Johnson, Christie, & Yawkey, 1999; Piaget, 1942). Children's play can be facilitated and encouraged by an adult's structuring role. The play that results is more frequent, of longer duration, and more sophisticated than that found in children who have not interacted with adults (Bornstein, Haynes, O'Reilly, & Painter, 1996; Vygotsky, 1978). Many parents, especially those who are of low social or economic status or who have depressed educational levels, do not understand the importance of play, nor do they know how to play with their children (Gottfried, 1984). These children may be at risk due to the lack of appropriate play partners (Bradley & Caldwell, 1984).

Play memories are important signs of the child inside the adult (Johnson, 1998). The quantity and quality of play memories can be used to explore possible connections with parents' play style with children. The activity of drawing pictures about play memories has revealed that adults' beliefs about play may stem from their own childhood experiences (Henninger, 1994; McLane, Spielberger, & Klugman, 1996). The use of play memories may also be an effective catalyst for building home visitor-parent rapport. Home visitors have described recalling their childhood memories as a personally beneficial experience, which also provided an impetus for improved facilitation of parent-child play interactions (Welteroth, 1999).

This poster presents preliminary findings from an ongoing research project. Snyder, Union, Mifflin Child Development, Inc. administers Early Head Start within three rural counties of central Pennsylvania, through weekly home visits. During a series of family days at the center, parents were invited to recall their own memories of playing, within four age groups: (a) 3 to 6 years old, (b) 7 to 12 years old, (c) 13 to 18 years old, and (d) as an adult. A group discussion of similarities, differences, and trends across participants ensued. The aim of the activity was to help parents touch their own inner child and provide some insight into how they view their own beliefs about play and how those beliefs affect their play with their own children. Following this activity, parents were given cameras to record their favorite instances of parent-child play. These photos were used to chronicle growth within the realm of parents and children playing together, as well as to provide examples of similarities between childhood play memories and subsequent parent-child play.

Preliminary results concerning play memories and family photos are viewed as encouraging and as process evaluation findings, which provide a source of information for staff development and continued program planning and implementation. Two advantages are already apparent with work in progress. First, the play memory task appears to serve as a catalyst, priming parents

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to see better both the value of play and also their own hidden resources as a play partner with their own children. Secondly, family photos achieve documentation, bases for sharing and coenabling, and the mutual building of self-respect for all participants in a supportive context.

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Mixing Child Services With Spirituality: How Do the Two Interface to Help Children and Families Cope?

Dominicus So

PRESENTER: Dominicus So

Social service programs for children and families have often distanced themselves from issues of religion and spirituality. Yet, most Americans claim a belief in God and want their children to receive religious education. In some subcultures, the inclusion of religion and spirituality in working with families with children is particularly important (Boyd-Franklin, 1989). In recent years, children's service programs and family therapy have gradually moved toward stronger emphases on ecosystem influences, including those from organized religions. The overlapping and interacting roles of spirituality/religion and family therapy include a desire to foster a sense of perspective, to give meaning to life, to provide rituals, to provide social support, to structure society and set norms, to give members an identity and heritage, to facilitate positive change in individuals, to protect members' welfare, and to educate members (Stander, Piercy, MacKinnon, & Helmeke, 1994).

Spirituality and religion have an impact on many areas of family life, social services for children and their families, and child-centered family therapy. Religious parents and/or children come into social service agencies with a system of values, attitudes, beliefs, and behavior prescribed by their religious orientation. Some religious values, attitudes, and behaviors include ideals about family life, marriage, parenthood, family purpose, family size, procreation, meaning of love and unity, boundary and inclusion, sexuality and intimacy, gender roles, division of labor, power and control, and the methods of raising and disciplining children. In short, one's religious/spiritual orientation may foster healthy or pathological behavioral patterns in children and families.

Many specific areas and skills to help children and their families that involve spirituality are discussed. Social service programs for children can help revitalize the family's spiritual energy and motivation, and search and affirm the meanings of the family relationship. Child therapists and others can use therapeutic disclosure of spiritual self, incorporate the family's spiritual worldview and metaphors, and spiritually reframe the issues of family boundaries, intimacy, power structures, and regulations. When appropriate, explicitly religious/spiritual practices such as prayers, scriptural readings, rituals, bibliotherapy, and spiritual correlation may be used.

When explicitly spiritual activities are not appropriate or indicated, child service providers can foster child and family's spiritual virtues of trust, patience, repentance, forgiveness, and acceptance, or use implicitly spiritual techniques, such as, guided imagery, gestalt techniques, empty chair technique, journals, and letter writing. Community and consultative work can include utilizing family's religious network, collaboration with the clergy, and prevention of child abuse and neglect, sexually transmitted diseases, and violence.

While religious/spiritual strategies can be contraindicated at times for ethical and legal reasons, ethical and professional dilemmas and guidelines should be considered at all times. Dual/multiple relationships should be avoided. Confidentiality and informed consent should be observed. Child service providers should be aware of one's religious/spiritual self and its limits, respect clients' religious authority, observe church-state boundaries, and avoid imposing religious values on clients and practicing beyond one's professional competence. Lastly, workers should fulfill their professional obligations to report child abuses and neglect, while sensitive to the need for acceptance and forgiveness.

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Parental Optimism: Relationship to Problem Behavior in Children With and Without Mental Retardation

Lesley C. Keeler, Bruce L. Baker

PRESENTER: Lesley C. Keeler

Optimism, or a tendency to expect more favorable future outcomes, has been linked to better physical and psychological well-being. People who are optimistic tend to be more accepting of transitions and life changes and tend to cope more effectively in trying situations. The positive effects of optimism on the individual have been well researched (as discussed in Scheier, Carver, & Bridges, 1994). The principal aim of the present study was to determine how this trait influences the larger dynamic of the family, and the parent-child dyad in particular, in families with young children with developmental delays.

Many young children with mental retardation also manifest maladaptive "problem" behaviors that make mainstream classes and social settings further unavailable to them. Dual diagnosis is defined as the comorbidity of any level of mental retardation accompanied by one or more mental disorders (American Psychiatric Association, 1994). The emergence of psychopathology in young children with mild to moderate mental retardation has received very little focused research attention, however, despite literature that suggests that adults with mental retardation are 3- to 5-times more likely to develop a diagnosable disorder than the general population (Nezu, Nezu, & Gill-Weiss, 1992). Problem behaviors in young children have been shown to contribute to heightened levels of parental stress (Baker & Heller, 1996), which can further exacerbate behavior problems over time.

The researchers were concerned with several key questions: (a) Do parents of children with cognitive delays differ in optimism from parents of children without delays? (b) Can parental optimism act as a moderator of child problem behaviors or psychopathology in children with developmental delays? and (c) How is optimism related to other potential moderators of psychopathology, such as parental stress?

These questions were addressed utilizing 73 three-year-old children with mild to moderate mental retardation and 114 comparison children without delays already participating in a larger longitudinal study of dual diagnosis. To assess optimism, parents completed the Life Orientation Test-Revised (Scheier et al., 1994). Two measures of child behavior problems were collected. First, parents filled out a Child Behavior Checklist age 1 1/2 to 5 (Achenbach & Edelbrock, 1983). Second, developmental assessors completed the Bayley Scales of Infant Development- 2nd Edition Behavior Rating Scale (Bayley, 1993) immediately following the developmental evaluation. Finally, parents completed the Family Impact Questionnaire (Donenberg & Baker, 1993) to examine the relationship of optimism to parental stress.

Mothers of children with developmental delays did not report lower levels of optimism overall relative to mothers of children without delays. For both groups of children, however, "low optimism" mothers reported more child behavior problems than did "high optimism" mothers. Further, the difference in reported level of problem behavior was significantly greater for children with cognitive delays, suggesting that optimism is in fact acting as a moderator of perceived problem behaviors for this group. Additionally, maternal optimism was found to contribute significantly to maternal stress above and beyond the child's developmental status and level of behavior problems. Analyses run using father data yielded similar results. These results suggest that optimism, inasmuch as it moderates the relationship between developmental delay and behavioral adjustment by way of improving the parent-child dyadic relationship, is another key variable to consider in the overall goal of early intervention.

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Head Start Children and Families: Strengths, Challenges, and Types in a National Sample

Robin Gaines Lanzi, Janice N. Cotton, Craig T. Ramey, Sharon Landesman Ramey

PRESENTER: Robin Gaines Lanzi

Head Start families become Head Start families based on a single criterion: The family's income at the time of application is below the federal poverty line for a family of a given size. There is one exception to this: If a child has a disability, the family does not need to meet the income eligibility criterion, although in fact the overwhelming majority of Head Start children with disabilities also come from families with poverty level incomes. In this study, descriptive information about the natural diversity that occurs within a multisite, longitudinal study of almost 3,000 former Head Start children and their families is presented. A family strengths index was created based on six characteristics of the primary caregiver, family, and neighborhood. The majority of the families had either one (39%) or two (22%) strengths. Only about 12% reported having three or more strengths. Interestingly, more than a quarter of the families did not report strengths. The mean strength was 1.22 (1.06 *SD*). A family challenge index was created based on twelve characteristics of the primary caregiver, family, and neighborhood. There was variability in the number of challenges reported by families, such that: (a) 13% reported zero challenges, (b) 19%-one challenge, (c) 22%-two challenges, (d) 18%-three challenges, (e) 14%-four challenges, and (f) 14%-five or more challenges. The mean challenge was 2.52 (1.77 *SD*). The correlation between the family strength and family challenges indices was -0.42 ($p < .001$).

A series of data analyses were conducted to develop a typology of former Head Start families at entry to school. Five or more challenges were reported by over half (58%) of Homeless families, 35% of Chronic Health Problem families, 28% of Highly Mobile families, and 21% of Aid to Families with Dependent Children (AFDC)/SSI/Single Parent families. None of the High Mobility, Homeless, or Chronic Health Problem family types reported having zero family challenges. Conversely, 54% of the High Resources families reported having zero or one challenge, 31% of the English as a Second Language (ESL) families reported having zero or one challenge, and 32% of the Absent Mother families reported having zero or one challenge. Relative to family types and family strengths, at least 75% of the following families reported having zero or one family strength: (a) Absent Mother families (79%), (b) AFDC/SSI/Single

Parent families (77%), and (c) Homeless families (75%). On the other hand, at least three strengths were reported by 22% of the High Resource families, 19% of the ESL families, and 12% of the Chronic Health Problem families. Interestingly, Absent Mother families reported the fewest strengths and reported few challenges, whereas, Chronic Health families reported a high number of challenges and somewhat high numbers of strengths.

What is often ignored in studies of how children adjust to school is the relationship of poverty to many other life conditions and resources available to children, families, their schools, and communities. Accordingly, in this study, it was recognized from the beginning, that different children and families might have different needs, in part related to their life situation when the children enrolled in kindergarten. Further, families are not static, and changes in the family's life situation may contribute to other important changes in the child's adjustment to school.

A Profile in Resilience: Young Children in Foster Care

Brenda Jones Harden, Mary Lyons, Dawn Kastanek

PRESENTER: Brenda Jones Harden

Over the last several years, children in foster care have become a larger segment of the Head Start population (Yoshikawa & Knitzer, 1996). Scholars have pointed to a higher probability of developmental delay in preschool foster children and called for universal developmental screening of all children entering the foster care system (Dale, Kendall, & Schultz, 1999). The current study examines the developmental functioning of a group of forty-five 4- 6-year-old children in foster care with prior histories of maltreatment. Assessments were conducted on their receptive vocabulary, expressive vocabulary, and nonverbal problem solving. Their foster caregivers responded to a set of questionnaires that addressed their mental well-being, concrete resources, parenting attitudes, parental stress, home environment, and background issues such as educational, occupational, and income status. Results indicated that in this sample of preschool foster children, the majority had average or above expressive vocabulary and nonverbal problem solving, but only slightly over one third had average or above receptive vocabulary. Home environment was the only caregiver variable that was significantly associated with child developmental functioning. These findings point to potential resilience in young foster children who have normal functioning in at least two domains, despite the adverse context of out-of-home placement, multiple caregivers, and prior history of maltreatment. Children in the foster care system would benefit from services in Head Start programs, specifically the mandated developmental screenings. Thus, children who present with developmental delays can receive appropriate intervention. In addition, their foster caregivers would have access to support services that could enhance the quality of their home environments as well as the development of the children reared in these environments.

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An Initial Look at Measuring Resiliency in Young Children

Jack A. Naglieri

PRESENTER: Jack A. Naglieri

A growing body of research on resilience indicates that children can weather risk and adversity. Werner and Smith (1982, 1992) and others have shown that some children can do well despite adversity. These children are resilient, referring to their capacity to achieve positive outcomes despite stress and adversity. They have protective factors or individual and environmental characteristics that moderate the negative effects of stress and result in more positive behavioral and psychological outcomes. Essentially, protective factors offset or balance the effects of risk and adversity. Children whose protective factors are lacking or underdeveloped are more likely to develop emotional and behavioral problems under similar risk conditions.

Resiliency in children can be measured using the Devereux Early Childhood Assessment (DECA; LeBuffe & Naglieri, 1999). This scale is standardized on a sample of 2,000 children aged 2-6 years who are representative of the United States population on a number of variables. The 27-item DECA yields a Total Protective Factors score and there are Initiative, Self-control, and Attachment scales. Also included is a scale of Behavioral Concerns. Each scale is set on a *T*-score metric (mean of 50; *SD* of 10). The Protective scales are scaled so that high scores are desired, but the Behavior Concerns scale is set so that low scores are desired. The DECA Total Protective Factors Scale has internal reliability coefficients for parent raters (.91) and teacher raters (.94) that exceed the .90 minimum suggested by Bracken (1987). Internal reliabilities for the remaining scales all meet or exceed the .80 minimum for scale scores suggested by Bracken.

Validity of the DECA, the focus of this proposed poster, was examined using a criterion-related study of two groups of children: (a) those with documented emotional and behavioral problems, and (b) those without. LeBuffe and Naglieri (1999) studied a sample of 181 children (95 Identified and 86 Nonidentified). The two samples were very similar on the basis of age (mean and *SD*s are 4.6 and .9, respectively), percentages of males and females (66/34%; 67/33%), and percentage of African Americans (27/33%), respectively for Identified and Nonidentified samples. Comparisons of the *T*-scores earned by the samples showed large effect sizes and significant *F* values. Further analysis of these data showed that 67% of the Identified and 29% of the Nonidentified samples earned Total Protective Factors Scales scores below 41. Thus the Protective Factors scores were significantly ($c^2 = 26.5$, $df = 1$, $p < .001$) related to group membership. Similarly, 78% of the Identified and 35% of the Nonidentified samples earned Behavioral Concerns Scale scores above 59, which was significant ($c^2 = 34.2$, $df = 1$, $p < .001$).

These data suggest that protective factors/resiliency, in preschoolers can be reliably measured and that these scores did an adequate job of differentiating groups of children with and without emotional/behavioral problems. More research is clearly indicated, especially to investigate the extent to which high resiliency scores act as a buffer to environmental problems.

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Replicability of a Resiliency-Based Early Childhood Prevention Program

Kathleen Bodisch Lynch, Susan R. Geller

PRESENTER: Kathleen Bodisch Lynch

The replicability of an early childhood resiliency-based prevention program was assessed by analyzing multistate, multiyear effectiveness data. "Al's Pals: Kids Making Healthy Choices" was first developed and field tested in Head Start and other community preschool classrooms in Virginia during 1993-1994. Translating implications from resiliency research into classroom practice, "Al's Pals" is designed to promote the protective factor of social-emotional competence and decrease the risk factor of early and persistent aggression or antisocial behavior. The intervention comprises a 46-lesson prevention curriculum and accompanying required teacher training. Systematic evaluation has been an integral part of program planning, development, and improvement during all years of the project. Both process and outcome evaluation data have been collected and are still being collected in 1999-2000. For this replication study, most sites were Head Start classrooms and other community-based preschool or child care centers in urban, suburban, and rural locations in Virginia and Michigan. One site was an urban after school prevention project serving kindergarten through grade 2. Both quasi-experimental and true experimental designs were used, with classrooms being selected and assigned to Intervention or Comparison conditions on the basis of their having children with similar characteristics and teachers with comparable skill levels. All instruments were teacher-scored child behavior rating scales. For all sites that had Intervention and Comparison or Control groups, repeated measures analysis of variance was used to compare behavior ratings at pretest and posttest. For classrooms without Comparison groups, paired *t*-tests were used. Data were reported for 67 classrooms (894 children) in Intervention groups with 35 classrooms (446 children) as corresponding Comparisons or Controls, as well as for 37 classrooms and 539 children in Intervention classrooms without Comparisons.

Outcome data indicated that children who participated in "Al's Pals" made statistically significant gains in prosocial skills relative to nontreatment comparison group children. Conversely, comparison children's aggressive and antisocial behavior ratings increased significantly, while intervention children's did not. Specifically, significant differences were found between the Intervention and Comparison groups, in favor of the Intervention children, during each of the 3 years, at each of the program sites (i.e., Virginia and Michigan early childhood programs, Virginia after school prevention program), on measures of prosocial behavior (VIDD, 1994) and positive coping styles (Eisenberg, et al., 1993). Statistically significant gains were noted for sites lacking comparison groups. There were also statistically significant differences in the desired direction between the groups on the Antisocial/Aggressive subscale of the Preschool and Kindergarten Behavior scales (Merrell, 1994).

In summary, evaluation data on child outcomes collected over a period of 3 years in a variety of geographic locations have consistently shown that young children who participated in "Al's Pals" increased in social-emotional competence relative to similar groups of children who were in nontreatment comparison or control groups. Furthermore, children in the intervention group did not develop increased aggressive or antisocial behaviors during the time period of the program, while comparison-control children did. Thus, the program has clearly demonstrated effectiveness and replicability.

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The Protective Role of Early Education and Care for Children Growing Up in Poverty

Erin Oldham

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The poster reports findings from a study of resiliency and vulnerability among children growing up in circumstances of poverty. Results are based on analyses with a sample of families that had applied for or were receiving AFDC (Aid to Families with Dependent Children) during 1992-1993 in Fulton County, Georgia. These families were randomly assigned to the Federal JOBS Evaluation funded by the Department of Health and Human Services/Assistant Secretary for Planning and Evaluation (HHS/ASPE) and the Department of Education, and conducted by the Manpower Demonstration Research Corporation (MDRC) and Child Trends Inc. As part of this study, family functioning and child development were followed over a period of 5 years. The reported analyses examined data within the sample at the 2-year follow-up. Our goal was to explore risk and protective processes involved in cognitive competence among a group of children thought of as "at-risk."

Specifically, we were interested in investigating whether participation in early education and care operates as a protective process in its influence on child outcomes in the presence of differing numbers of risk factors. Theory from Rutter (1987) and Garmezy (1993) suggests that a factor such as early education and care should only be considered "protective" if associated with better child outcomes among high-risk children as opposed to low-risk children.

Recent literature supports the possibility that early education and care may operate in a protective manner with regard to both socioemotional and cognitive outcomes (Caughy, DiPietro, & Strobino, 1994; Peisner-Feinberg & Burchinal, 1997). With regard to Head Start, Brody, Stoneman, and McCoy (1994) found that particular aspects of Head Start, such as caregiver self- esteem and engaged, cognitively challenging caregiver-child interactions, were related to child competence. On the other hand, it is also possible that some children are living in families negotiating multiple risks and thus are unable to benefit from child care (IHDP Research group, 1997).

We investigated the role of early education and care as a protective factor in its influence on children's cognitive outcomes. Discriminant function analyses were used to determine "sensitive" risk indices for resilient cognitive (Bracken Basic Concept Scale; Bracken, 1984) outcomes. That is, we only consider risk factors that evidence some extent of relation with the child outcome considered. Structural equation modeling using Mplus was utilized to determine the role of early education and care as a protective variable within a complex model considering the risk index as well as five other possible protective variables: (a) early social maturity, (b) early cognitive skills, (c) home environment (maternal warmth and cognitive stimulation), (d) social support, and (e) maternal employment.

We found that sensitive risk indices and protective variables contributed to reasonable models of children's cognitive competence. Specifically, early cognitive and social skills as well as the early risk environment were strong predictors of later cognitive skills. Cognitive stimulation in the home and outside of the home (e.g., in early education and care arrangements) was protective for cognitive outcomes among higher risk children. Comparative analyses suggest that these results may not hold for children attending Head Start due to differences in their extent of participation in early education and care and the characteristics of their home environments.

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Family and Parenting Strategies in High Risk, African American Neighborhoods

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Increasing family and neighborhood impoverishment among African Americans has raised questions about the developmental consequences of rearing children in inner-city neighborhoods (Huston, 1991; Huston, McLoyd, & Coll, 1994). Theoretical discussions of neighborhood effects have posited a negative relationship between inner-city residence and future social mobility prospects (Brooks-Gunn, Duncan, Klebanov, & Sealand, 1993; Crane, 1991; Jencks, & Mayer, 1989). Children growing up in impoverished neighborhoods are more likely, upon adolescence, to drop out of high school, parent prematurely, and engage in antisocial activities. While studies guided by neighborhood effects theories document the experience of some African American children growing up in impoverished neighborhoods, they omit the positive experiences of children who will overcome the obstacles associated with inner-city residence (Jarrett, 1997).

Two theories, neighborhood resource and collective socialization, have been proposed to explain the process by which impoverished neighborhoods impair the future social mobility prospects of children (for an overview see Furstenberg, Jr. & Hughes, 1997; Jencks & Mayer, 1989). Neighborhood resource theory argues that impoverished African American neighborhoods have a limited supply of good quality child serving institutions and facilities, such as parks, schools, and libraries. Consequently, poor children have little exposure to enriching educational, social, and cultural contexts (Chase-Lansdale, Brooks-Gunn, & Klebanov, 1997; Klebanov, Chase-Lansdale, & Brooks-Gunn, 1997). Collective socialization theory maintains that inner-city neighborhoods lack middle class residents who provide conventional role models and social control for poorer residents. Nonfamily adults who engage in ghetto-specific behaviors are the most significant role models in children's lives. Through frequent exposure to unconventional adults, children are encouraged to emulate alternative lifestyles as they mature (Brooks-Gunn et al., 1993; Jencks & Mayer, 1989; Wilson, 1987).

Neighborhood effects theories have been primarily tested with quantitative data. In most cases these studies have focused on the negative consequences for children growing up in impoverished neighborhoods. As an addendum to this line of research the current study uses ethnographic data to examine the ways in which parents promote the likelihood that their children will have positive social mobility outcomes in later life. Twenty-seven mothers from three Head Start sites were the target informants. Additional information was provided by target informants' mothers, siblings, and male companions. Women in the mother generation ranged in age from 22-46 and received some form of public assistance. All of the families lived in Chicago neighborhoods with medium to high rates of poverty. Ethnographic field data were collected with families from 1994 to 1998. Specific data collection strategies included participant observation in the homes, neighborhoods, and Head Start sites. In-depth interviews that were conducted covered a range of topics including household routines, parenting beliefs and practices, views of the neighborhood, and views of Head Start. Grounded theory was the key methodological strategy used for analyzing the data (Glaser & Strauss, 1967). An inductive, phenomenological methodology, grounded theory facilitates the discovery of meanings, social processes, and social interactions as they emerge from observations and interviews. Ethnograph, a qualitative data management program, was used to facilitate the coding of the interview and observational data. The field data identified four main strategies that competent African American families used to protect their children from the negative consequences of living in impoverished inner city neighborhoods. These included: family protection strategies, child monitoring strategies, parental resource-seeking strategies, and in-home learning strategies:

1. Family protection strategies, or those behaviors that families used to manage their daily lives, included avoidance of dangerous areas, temporal use of the neighborhood, and restrictions on neighboring relations.
2. Child monitoring strategies that buffered children from neighborhood dangers and negative adult and peer influences included confinement and chaperonage.
3. Parent resource-seeking strategies, or efforts used to garner resources on behalf of their children, often-targeted local institutions such as churches and recreational centers, as well as Head Start programs.
4. In-Home learning strategies that facilitated the intellectual development of young children included reading to children, supervising writing and coloring tasks, and quizzing children on knowledge learned in preschool.

Insights derived from the ethnographic data expand on neighborhood resource and collective socialization theories. The findings indicate that parental resource seeking strategies and in-home learning strategies can expose children to good quality resources and experiences, despite neighborhood limitations. Furthermore, parents in impoverished neighborhoods use family protection strategies and child monitoring strategies to buffer themselves and their children from ghetto-specific influences and role models. These interaction strategies allow some poor families and children to lead mainstream lifestyles within impoverished neighborhoods.

The ethnographic findings suggest directions for programs such as Head Start that seek to enhance the well-being of children in impoverished neighborhoods. The data suggest the kinds of parenting skills and competencies that are needed to navigate the development of children in poor neighborhoods. These are skills that less competent parents can be taught to ensure better outcomes for their young children. These parenting skills are particularly accessible in Head Start programs, which can continue to provide parenting and training for both adults and children.

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Examining the Concept of Maternal Self-Efficacy in Mothers of Toddlers Enrolled in an Early Head Start Program

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PRESENTER: Rena A. Hallam

Based on a social learning perspective (Bandura, 1997), the construct of parental self-efficacy is explored within a small sample of low-income, culturally diverse mothers of toddlers enrolled in an Early Head Start program. The intent of this study was threefold: (a) to determine relevant factors in the lives of low-income mothers that influenced mothers' parental self-efficacy, (b) to examine the relationship between maternal self-efficacy and behavioral interactions between mothers and their toddlers, and (c) to examine possible associations between parental self-efficacy and participation in an Early Head Start program. Using questionnaire, observation, and interview methodologies, assessment of 20 mothers' parental self-efficacy was conducted. In addition, depression, knowledge of child development, perception of child temperament, life stress, and parenting stress were assessed. Mother-child interaction was assessed using a semistructured play scenario.

In general, mothers reported a high level of efficacy in the parenting role. However, mothers reported higher task-specific efficacy (e.g., efficacy regarding daily caregiving events) as measured by the Toddler Care Questionnaire (Gross & Rocissano, 1988) than more generalized notions of parental self-efficacy as measured by the Parental Competence subscale of the Parenting Stress Index (Abidin, 1990). Qualitative results indicate that many daily events that are particularly salient for low-income mothers, such as protecting children from negative influences in the neighborhood, balancing time between caring for their child and employment or job training, and being the sole caregiver for their child, often more accurately reflect their feelings of efficacy. These issues are not typically included within current parental self-efficacy measures. Parenting issues identified on the Toddler Care Questionnaire, although very relevant to toddlerhood (toileting and temper tantrums), may obscure or fail to encompass many of the daily issues confronted by low-income mothers. These concerns highlight the importance of seeking to understand parental self-efficacy within an ecological framework (Bronfenbrenner, 1986).

Surprisingly, both the task-specific and generalized measures of parental self-efficacy were negatively correlated with maternal behavior. Thus, mothers reporting the highest levels of parental efficacy tended to demonstrate less positive, emotionally responsive behavior in their interactions with their toddler. This finding could be attributed to the measurement issues previously identified. However, this finding clearly indicates the need to ensure that assessments of parental self-efficacy are not viewed in isolation, for example, high parental self-efficacy is not necessarily indicative of more positive parenting practices. Although this integrative view is indicated by Bandura, self-efficacy is often examined in isolation.

Regarding participation in the Early Head Start program, all of the mothers reported receiving child development and parenting information. However, mothers who reported having an emotional relationship with their Early Head Start service provider were more likely to describe the program as influencing their feelings of confidence as a parent.

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Maternal Resiliency Attitudes, Social Networks, Social Support, and Demographic Profiles of Culturally Diverse Early Head Start Suburban Applicants

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Parenting resiliency, social networks, and resources appear essential for parenting and child development (Friedman & Wachs, 1999). Prior research suggests that social networks and resources protect adult coping (Werner, 1993) while resilience protects children's coping (Fraser, 1997). Little, however, is known about the interplay of parents' resiliencies, social networks, and resources.

Mandated to address the needs of infants and toddlers living in poverty (Federal Register, 1995a, 1995b), Early Head Start (EHS) promotes child development, parenting, and family self-sufficiency by focusing on parents' resiliencies, needs, and priorities. To support this aim, the study examined maternal resiliency attitudes and their connection with demographics, social networks, and resources of 149 EHS applicants at a suburban Northern Virginia site. Resiliency attitudes were measured by the Resiliency Attitude Scale (RAS; Biscoe & Harris, 1994), which has established criterion validity for substance abusing mothers and correlates in predicted directions with depression and self-esteem. The scale has a present Cronbach alpha reliability of .84. Social networks included 8 items about family structure and residential stability. Resources combined 11 items on public service use and 21 items on the Risk Resource Needs Index. The resources were adapted from the Family Resource Scale (Dunst, Trivette, & Deal, 1988), which has established criterion validity for personal well-being and parents' commitment to intervention, and high reliability for poor families with young children (Dunst & Leet, 1987).

The Demographic Risk Index included mothers' birth status (U.S.-born vs. immigrant), education, English mastery, age, homelessness, transportation, and income. Additional demographics included child's age, fathers' employment, and ethnicity. Demographics, social networks, and resources were measured by the Head Start Family Information System (HSFIS) included in the National EHS Parent Application and Enrollment Form (Mathematica Policy Research, Inc. 1998).

The sample was culturally diverse with 62% being U.S.-born and 38% immigrants. These groups did not differ on the following characteristics at enrollment: (a) age of mother (ranged 14-40 years), age of father (20-40 years), age of child (birth-1 year with 12% enrolled prior to birth); (b) employment (mothers 28%, fathers 89%); (c) household size (3-6 persons); (d) who child lives with (60%-both parents, 21%-mother alone); and (e) homelessness (15.5%), stability (50% 0 moves, 40% 1-2 moves). The groups differed ($p < .05$), however, on: (a) less than high school education (62% immigrants, 14% U.S.-born); (b) less than adequate English skills (88% immigrants, none U.S.-born); (c) income $15,000 and below (80% immigrants, 58% U.S.-born); (d) reliance on only friends for support (23% immigrants, 5% U.S.-born); (e) 1-2 public service use (70% immigrants, 61% U.S.-born); (f) less than adequate basic resources (70-90% immigrants, 22-67% U.S.-born) and family resources (63-88% immigrants, 17%-46% U.S.-born); (g) Demographic Risk Index (immigrant Mean 5.13 with *SD* 1.2, U.S.-born Mean 2.36 with *SD* 1.3); and (h) Resource Needs Index (immigrant Mean 45.71 with *SD* 7.8, U.S.-born Mean 33.03 with *SD* 6.9), and total RAS (immigrant Mean 73 with *SD* 7.66, U.S.-born Mean 71 with *SD* 6.47).

Results indicated that higher RAS were correlated with lower Demographic Risk Index (r -.37, $p < 0.001$) and Resource Needs Index (r -.25, $p < 0.002$), and unrelated to social networks and some demographic variables. The combined final risk effect was able to explain 16% of variance in mothers' total resiliency ($p < 0.001$).

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An Examination of the Relation Between Maternal Resiliency, Demographics, and Supports in Rural Early Head Start Eligible Families

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This study examined the resiliency attitudes of 125 rural (Arkansas) mothers of children enrolled in the evaluation of Early Head Start (EHS). The relationship between resiliency attitudes and characteristics thought to be associated with resiliency behavior were explored. Resiliency attitudes were assessed using the 72-item Resiliency Attitudes Scale (RAS) developed by Biscoe and Harris (1994). Resiliency constructs assessed included: (a) Insight, (b) Independence, (c) Relationships, (d) Initiative, (e) Creativity and Humor, (f) Morality, and (g) General Resiliency (the persistence to work through difficulties). The alpha reliability of the total scale is .91. Nonlinear relationships were examined by grouping individuals based on their RAS score into High (> 1 *SD* above the mean), Average (1 *SD* around the mean for this sample), and Low resiliency attitudes (< 1 *SD* below the mean).

Participants were drawn from the area around three small towns in western Arkansas. Seventy-eight percent of the mothers were White (13% Black, 10% other). Most mothers were single (63%) and employed (47%). Almost all (99%) received some sort of government assistance, and 67% of children were covered by health insurance (and/or Medicaid). Sixty percent of families had moved at least once in the last year, and 10% had been effectively homeless in the last year. Associations were examined using Somers'D or chi-square statistics.

Participants that were married or White had higher RAS scores than nonmarried or non-White groups. Less education was associated with low RAS scores. Families that had been homeless in the last year were less likely to have the highest RAS scores. None of 11 items measuring the services or financial assistance the family receives were related to RAS scores. Of the 21 items assessing resource needs, 6 were related to RAS (families indicated if the resource was Adequate to Inadequate on a 5 point scale). Low and high RAS participants rated heat and water and someone to talk to as inadequate. Only the families with average RAS scores found the level of parent information as adequate. Participants with low RAS scores rated the availability of special equipment for children and their (or their spouse's) job as inadequate. High RAS participants rated transportation as inadequate. In order to examine the associate of multiple risks and needs with resiliency attitudes, two indices were computed. A risk index was computed as the sum of demographic risks (homelessness, minority status, unemployed, lacking transportation, and less than a high school education). A need index was computed as a sum of the resources rated as inadequate. These scores were associated with each other ($r = .27$). They had small associations with the total RAS score (Risk $r = -.19$ and Need $r = -.17$).

This study begins to investigate resiliency attitudes of high-risk rural families. This is of interest because of the EHS goal to help families develop the capacity to cope with future financial and personal setbacks (often labeled resiliency) in order to be considered successful. Little is known about these relationships, particularly for families living in rural areas where large distances separate families from supports and few community resources exist.

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Classroom Adjustment and Temperamental Differences of African American Head Start Children

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Professional attention to preschool problem behaviors is relatively recent. Such behaviors have historically been viewed as transitory and too infrequent to merit concern (Rose, Rose, & Feldman, 1989). However, a growing body of evidence indicates that preschool behavior problems are relatively stable, correlate significantly with other problems, and predict negative outcomes in future development (Lavigne et al., 1996). Temperamental differences have received attention in the literature as contributing to behavior difficulties of young children (Hart, Olsen, Robinson, & Mandleco, 1997; Kagan, 1997). Studies also reveal interactions between temperament and gender (Sanson & Rothbart, 1995); however, Hart et al. caution that temperament literature findings are generally decontextualized and applicable only for children from middle-class, White households. Possible differences among diverse groups of children warrant further investigations of temperament and classroom adjustment (Fabes, Shepard, Guthrie, & Martin, 1997).

The present study examined age and gender variability for constructs related to children's adjustment and temperamental dispositions in their preschool classroom. Adjustment data were collected on 800 urban African American Head Start children enrolled in 50 Head Start classrooms, while temperament data were collected on 150 additional children. Two teacher rating scales were used to examine key constructs. The Adjustment Scales for Preschool Intervention is designed to identify children evidencing adjustment problems in Head Start classrooms. It contains 24 Head Start classroom situations or contexts, each of which frames several positive and problematic behaviors children may display. Five syndromes are obtained: (a) Aggressive, (b) Lethargic-Withdrawn, (c) Reticent, (d) Oppositional, and (e) Inattentive-Hyperactive. Internal consistency, construct validity, and criterion validity were established with urban Head Start children (Lutz, 1999/2000). The Temperament Assessment Battery for Children (T-ABC; Martin, 1988) is designed to rate basic temperament or predispositions of children from 3 to 7 years old. The teacher form consists of 48 items describing child behaviors reflecting temperament dimensions that occur in the school setting. Three subscales were used in this study: (a) Activity Level, (b) Adaptability, and (c) Approach/Withdrawal.

Results indicated that younger children demonstrated significantly higher levels of lethargic/withdrawn, shy, and inattentive/hyperactive behaviors than did older children. Significant gender differences were evident for aggressive and inattentive/hyperactive behaviors, with boys showing higher levels of both dimensions. Comparisons for temperament constructs revealed that younger children were more active than older children. Conversely, older children demonstrated more approach tendencies than younger children. Lastly, males were rated as more active than females, while no gender differences were found for children's adaptability or approach tendencies (Mendez, 1999). Results document the adjustment difficulties of younger preschool children as compared with older children. Younger children's activity may impede their focus, while older children are more capable of approaching an ongoing classroom activity. Findings inform classroom practice for African American children by highlighting the adjustment difficulties of young males in particular. Females may demonstrate behavioral strengths and reduced aggression, which serve as a resource to enhance adjustment to preschool. Age and gender differences should be considered when developing preschool programming and providing feedback to children's parents.

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Children With Disabilities

The Golden SLPA Project: Serving Children With Communication Disabilities in Head Start

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This was a unique project designed in California, (the golden state) to educate and employ speech language pathology assistants (SLPAs) in Head Start Programs in Los Angeles County. Representing speech language pathology, Head Start, and community college occupational health programs, The Golden SLPA Project demonstrated the effectiveness of collaboration among disciplines, professions, regulatory agencies, welfare reform, and work settings.

The 1st year (1998) was spent planning and building awareness, and the 2nd (1999–2000) launched the first community college program to train culturally competent speech language pathology assistants (SLPAs). Applicants from another Head Start program, Developing A Partnership (DAP), were the first to qualify for the educational program. The next 2 years will build program capacity and match trainees to Head Start programs for their practicum experiences.

The majority of Head Start children identified with exceptional needs required speech and language intervention. These services could be offered in a Head Start program by speech language pathologists (SLPs) or by supervised, trained assistants (SLPAs). However, there was a nationwide shortage of speech language pathologists, and SLPA programs were nonexistent.

In 1997, the American Speech Language Hearing Association (ASHA) approved guidelines (*Guidelines*, 1997) to develop an AA degree and community college programs to educate Speech Language Pathology Assistants (SLPAs). Assistants need to reflect the linguistic and cultural diversity of the communities they serve, and ideally should be available to Head Start programs seeking speech language pathologists' services for their children. Federal welfare reform legislation, which became effective in 1998, sought meaningful employment for Head Start parents leading to self-sufficiency.

In September 1998, California's legislature passed a law (Assembly Bill 205, 1998) enabling Speech Language Pathology Assistants to become licensed paraprofessionals. On a national level, paraprofessionals were identified for the first time in the Individuals with Disabilities Education Act (IDEA '97) as persons trained and supervised to provide services to children with special needs. Noting these advances, Sonoma State University dedicated a portion of a federal grant to begin "The Golden SLPA Project" in California with Los Angeles County, the largest Head Start Grantee in the country. The Cerritos College Speech Language Pathology Assistants Program was created to train applicants from culturally and linguistically diverse Los Angeles County Head Start families to become speech language pathology assistants in those programs.

First 2-Year Outcomes:

1. Coordinated with California Speech Language Hearing Association.
2. Provided public comment on proposed state licensing regulations for SLPAs.
3. Designed, disseminated information brochure on Golden SLPA.
4. Used ASHA approved competencies to create new curriculum.

5. Launched Cerritos College program (Los Angeles County)
6. Selected students from 36 Head Start family applicants.
7. Held regular meetings of Advisory Board.
8. Presented at California Annual Head Start Conference, 1999

A speech language pathology assistant program can be started in any state, integrating ASHA guidelines, state regulatory agencies, and Head Start employment settings. Project outcomes effectively met the needs of Head Start children with speech and language disabilities and their families. It has the potential for informing research, policy, and programs for culturally diverse, low-income families with young children.

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Mother-Infant Play: Influences of Poverty and Disability

Lisa K. Boyce, Lori A. Roggman, Nathan D. Whittaker

PRESENTERS: Lisa K. Boyce, Lori A. Roggman

Play is thought to be a primary means of a young child's development (Vygotsky, 1976). Mothers often engage in play with their infants with behaviors ranging from responsively following their child's lead to more directly teaching their child. Maternal responsiveness to the child's lead during play is associated with more sophisticated infant play (Fiese, 1990). However, mothers of infants with disabilities are often directive and controlling during play (Brooks-Gunn & Lewis, 1982). Responsiveness in maternal play may thus depend on whether or not the infant is following a typical developmental trajectory.

The purpose of this study was to examine the relation between maternal involvement and level of play for typically developing infants and for infants with disabilities. Maternal involvement was defined as mothers' presence, assistance, and play. Maternal presence referred to a videotaped situation where the mother was asked to play with her child as she usually would, compared to a situation of being asked to let the child play alone. Maternal assistance referred to providing maternal guidance and support during play and included cognitive assistance, behavioral directives, positive support, and disapproval (Fagot & Gauvain, 1997). Comparable to cognitive assistance, physical assistance was also coded to provide a more comprehensive view of the types of assistance provided during play for infants both with and without disabilities. Finally, maternal play referred to the cognitive level or sophistication of the mothers' play.

Participants were primarily White, low-income families in rural Utah and Idaho, and included 22 typically developing infants from a local Early Head Start (EHS) program and 19 infants with disabilities (some from the same EHS program and some from two other early intervention programs). Infants were videotaped in their home for 7 minutes playing alone with a standard set of toys and then for 7 minutes playing with their mother with the same set of toys. Developmental status and basic demographics were also assessed. Trained observers coded videotapes for sophistication of infant and maternal play based on developmental sequences developed by Belsky and Most (1981) as well as maternal assistance.

Surprisingly, for this primarily low-income sample, maternal involvement during play did not seem to enhance infants' play. For both typically developing infants and those with disabilities, their level of play did not change when their mothers participated in their play. Furthermore, mothers in both groups used similar frequencies of cognitive assistance, physical assistance, behavioral directives, positive support, and disapproval during play. Future research should explore: (a) the influence of poverty on maternal involvement during infant play to better understand factors that may be different from our current research with middle socioeconomic families, and (b) how early intervention may support the mother and infant in play.

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Social Initiations and Responses of Normally Developing and Autistic Children in Day Care

Tara Flanagan, M. Kaye Kerr

PRESENTERS: Tara Flanagan, M. Kaye Kerr

The purpose of this study was to clarify whether children with autism socially interact less or differently than their normally developing peers. An earlier study (Kerr, 1996) found that children with autism initiated social interactions less often than their normally developing chronological age (CA) and mental age (MA) peers. Also, both children with autism and their peers were found to engage in more social interaction with an adult present than they were without the adult.

Some research (Kamps, et al., 1992; Osterling & Dawson, 1994; Roeyers, 1996) indicates that children with autism rarely initiate interaction and respond infrequently to the initiations of others. Other research (Lord & Hopkins, 1986; Stone & Caro-Martinez, 1990; Hauk, Fein, Waterhouse, & Feinstein, 1995) demonstrates that children with autism engage in social interactions, but that the interactions are qualitatively different from those of their peers.

Five children formally classified with Infantile Autism, who were fully included in two provincially funded day care centers, were matched with two children in the day care on the basis of CA or MA. Each child was videotaped in: (a) structured play, and (b) free play. Social initiations and responses were coded using a revision of Kerr's scale (1976).

The results of this study indicate that the social interaction patterns of autistic children are not indicative of a global social deficit. The groups of children were found to differ in their number of nonverbal interactions, $F(2, 125) = 3.44$, $p = .05$. Specifically, post hoc analyses indicated that children with autism responded nonverbally more than their CA peers.

Differences were found in the number of adult verbal initiations, $F(2, 125) = 4.08$, $p = .03$, and peer verbal initiations, $F(2, 125) = 4.49$, $p = .03$, to the different groups of children. Specifically, the adults verbally initiated more to the children with autism than to their CA peers, Scheffe's = 13.59, $p = .05$. The peers, however, verbally initiated more to the CA group than to the children with autism, Scheffe's = 2.64, $p = .03$. Also, there were differences in the number of nonverbal adult initiations, $F(2, 125) = 4.32$, $p = .03$. The adults nonverbally initiated social interaction more frequently to the children with autism than to the CA group, Scheffe's = 4.82, $p = .05$. These findings replicate those of the earlier study with a different sample (Kerr, 1996).

The results of this study underscore the need for caregivers to structure environments that encourage children with autism to interact socially. In this study adults are seen as the facilitators of social interactions for the children with autism. The incorporation of children with autism into inclusive day care settings provides an opportunity for them to learn social skills, as well as creates a vehicle through which adults may model social interaction strategies for normally developing peers. Further research is needed to identify the settings where peers most often interact with children with autism. Such information would assist practitioners and policymakers to further endorse the full inclusion of children with autism into child care programs.

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Reflections on Community-Based Inclusive Preschools

William H. Brown, Samuel L. Odom

PRESENTERS: William H. Brown, Samuel L. Odom

Researchers who have carefully examined early childhood inclusion have concluded that inclusion has important behavioral and social, but not necessarily intellectual and developmental, benefits for young children with disabilities and their families (e.g., Buysse & Bailey, 1993; Lamorey & Bricker, 1993). Indeed, given current programmatic evidence and the contemporary philosophical *Zeitgeist,* New and Mallory (1994) argued that an "ethic of inclusion" has emerged within early childhood education. Contemporary recommendations for inclusion of young children with disabilities notwithstanding, much remains to be learned about the nature of early childhood inclusion, particularly in community-based preschools. Given that 50% of the preschool children with disabilities served under the Individuals with Disabilities Education Act (IDEA) were served in regular classrooms (U. S. Department of Education, 1999) and that the majority of inclusive programs have been community-based; explicit descriptions of young children's experiences in community-based, inclusive preschools have been needed to inform our understanding of early childhood inclusion (cf. Odom et al., 1996).

The purpose of this multisite investigation was to describe the nature of preschool children's experiences in inclusive early childhood programs (Brown, Odom, Li, & Zercher, 1999). The momentary time-sampling information reported in this presentation represents 3 hours of observational data per child for 112 preschoolers with and without disabilities in 16 community-based, inclusive preschool programs in four states. In general, children with and without disabilities exhibited similar child behaviors and were meaningfully engaged in a variety of adult- and child-initiated activities within similar activity contexts. Two noteworthy between-group differences were that: (a) children without disabilities, compared to those with disabilities, participated in more child-child social behaviors, and (b) children with disabilities received more adult support and attention than peers without disabilities. The ecobehavioral data from this study began to "paint a portrait" of preschool inclusion. The "portrait" revealed that children with disabilities were physically included in their preschool programs. Nevertheless, the portrait also suggested that if social integration of young children with and without disabilities is a primary goal of preschool inclusion, then additional, focused intervention efforts may be required to establish socially inclusive programs for young children with and without disabilities. Specifically, teachers ought to implement social competence interventions to promote and support young children's peer interactions and social networks within inclusive preschools (cf. Brown & Conroy, 1997).

In this program of research we also addressed a second set of questions that related to the engagement of young children with and without disabilities in inclusive preschools. In early childhood education many professionals have assumed that child-initiation will result in children's engagement. In early childhood special education, however, many professionals have been concerned that children's developmental delays may necessitate additional adult facilitation to promote and support children's engagement in preschool activities. In this second study, we examined the levels of engagement of children with and without disabilities when adults initiated activities and when children initiated activities. We found that children with and without disabilities: (a) had similar levels of overall engagement, (b) were engaged more often when children rather than adults initiated activities, and (c) were engaged in different types of child behavior when adults and children initiated activities (Brown & Odom, 1999).

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Inclusive Education for Preschoolers With Disabilities: Comparative Views of Parents and Practitioners

Yvonne Rafferty, Caroline Boettcher

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Preschool inclusion has created challenges for Head Start providers, parents, and preschool special education providers as they attempt to design and implement high quality programs (Bricker, 1995; Ramey, 1999). Inclusion refers to the practice of educating children with disabilities in the same classroom as their nondisabled peers and providing them with the necessary supports to succeed. The goal is to provide all children with equitable opportunities for a successful education (Odom et al., 1996). Supporters believe that attitudes toward persons with disabilities will become more positive as a result of exposure and reduced fear. They also contend that children make greater gains in social, emotional, and communication development when learning opportunities are provided in settings with typical peers (Guralnick, 1999; Mills, Cole, Jenkins, & Dale, 1998). Opponents believe that the education of children without disabilities is compromised when children with disabilities are integrated into regular education classes and that children with disabilities make greater academic gains in segregated classes. Debate on this issue is hampered by the absence of a comprehensive research base that describes the impact of inclusion on young children, the characteristics of successful programs, and effective strategies that overcome policy and attitudinal barriers to inclusion. The few studies that exist, however, indicate that parents support inclusion (Rafferty & Boettcher, under review). Parents of preschoolers with disabilities report that integrated settings provide their children with real world exposure and opportunities to develop social relationships. Parents also have concerns, including the possibility of their child being rejected or teased by their nondisabled peers, social isolation, less services, inadequate teacher training, children's physical safety, the attitudes of regular education staff and students, and the district's commitment to providing integrated services.

Although studied less often, parents of preschoolers without disabilities are also generally supportive of integration. Reported benefits focus on changes related to social cognition (e.g., more aware of other children's needs), prosocial behavior (e.g., more responsive to the needs of others), and acceptance of human diversity (e.g., less likely to feel uncomfortable with people with disabilities; less prejudice and fewer stereotypes about people who look or behave differently). Desirable outcomes, however, cannot be presumed, and are associated with the quality of the program structure and process (Buysse, Welsey, Bryant, & Gartner, 1999).

Finally, while only a few studies have explored the attitudes of preschool staff toward inclusion, there is a high degree of correspondence between the attitudes of parents and school staff (Scruggs & Mastropieri, 1998). This presentation highlights findings from an identical survey involving 245 parents of preschoolers with and without disabilities and 121 preschool service providers. It was designed to assess: (a) global attitudes toward inclusion; (b) benefits and concerns about inclusion for children with disabilities; (c) impact of inclusion on children without disabilities; (d) the relative importance of type of disability, age, and severity of disability; (e) impact on families; and (f) program involvement and satisfaction. The implications of the research findings for both program and social policy are presented.

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Supporting Preschool Inclusion Through Collaborative Action Research

Joan Lieber, Jennifer Tschantz

PRESENTERS: Joan Lieber, Jennifer Tschantz

Since the early 1990s there has been an increase in the number of young children with disabilities served in inclusive programs. Head Start has provided leadership in these efforts because of the policy that mandates 10% of the children served in Head Start will have disabilities. Although numbers of children with disabilities served in all early childhood programs have increased, the practitioners who serve these children have expressed concerns about their ability to implement quality inclusive programs (Marchant, 1995; Peck, Hayden, Wandschneider, Peterson, & Richarz, 1989; Wesley, Buysse, & Tyndall, 1997).

In 1994, the Early Childhood Research Institute on Inclusion (ECRII) was funded by the U.S. Department of Education. The goals of ECRII were: (a) to identify facilitators and barriers to inclusion of preschool children; and (b) to develop, test, and disseminate strategies for supporting the participation of young children with disabilities in classrooms and in the community. To address the second goal, researchers collaborated with practitioners at a large early childhood center (Winwood) to generate a plan to overcome their "locally identified" barriers to preschool inclusion. The purpose of our 2-year partnership was to work with practitioners at the site to: (a) identify goals for inclusion, (b) identify and analyze the barriers to reaching those goals, and (c) develop and implement a plan to overcome the barriers.

Inclusion at Winwood was provided through "buddy classes." The principal paired a preschool special education class with either a Head Start class or a prekindergarten class. The children from the buddy classes participated together in integrated activities. These buddy class partners formed the core group for the collaborative action research project. There were five early childhood special education (ECSE) teachers, two Head Start teachers, three prekindergarten teachers, four specialists (motor, speech), and the principal. In the 2nd year of the project the original group was joined by six classroom assistants. We met monthly as a large group, and the research staff met individually with buddy class teams because the group decided that there might be inclusion goals that could be better met within a large group, and other goals that might be unique to a particular buddy class team.

During the 1st year, responsibility for organizing the team fell initially to the research staff, and we also assumed responsibility for developing an agenda for each group meeting based on issues raised during the previous meeting. Decisions that were made by the team during the group meetings were noted by the researchers and shared with the group. At the end of the 1st year, members of school staff began to assume greater logistical responsibility. In addition to our organizational function during the 1st year, we presented information and compiled resources for the team. The meeting procedures followed during the project's 2nd year were essentially the same as those instituted during year 1. During year 2, however, many of the discussion topics for the large group meetings were generated in advance. Further, rather than limiting our meetings to whole group discussions, most involved a brief presentation, then an activity for buddy class partners and their assistants, followed by large group discussion.

We used a variety of data sources to address the team's efforts to generate a plan to overcome the individual- and team-identified barriers to inclusion, and to document those efforts. Sources included questionnaires, interviews, practitioner-generated data, field notes, and documents.

During the 1st year the teachers identified and then worked with the administration to overcome logistical barriers. These barriers, related to coordination of class schedules and the schedules of specialists as well as time for planning, were significant. Before teachers could tackle the next set of barriers, the first needed to be eliminated, and they largely were eliminated through the support of the administration. During the 2nd year teachers primarily considered instructional barriers. They used each other as resources to explore solutions to problems with specific students, how to target the individualized education plan (IEP) objectives of children with disabilities during less-structured activities, and how to document children's progress.

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Project Child (Children Learn Differently): Using Team Collaboration to Increase the Active Participation of Children With Disabilities in Head Start

Billi L. Bromer

PRESENTER: Billi L. Bromer

Project Child was an outcome-directed, strategic plan to improve interagency collaboration between Head Start and the Lead Educational Agency (LEA) providing disability services to children with special needs. The project was designed to integrate children who display severe or moderate intellectual or physical disabilities into Head Start and to increase their participation in all classroom activities. Key elements of the project included the creation of a collaborative agreement between the two programs, incorporation of interagency collaborative team meetings into the Head Start routine, and the inclusion of informal on-site training to Head Start teachers on managing the needs of children with disabilities through increased involvement of special education staff. Public Law 105-17 guarantees full access to regular education that may be denied to some children with disabilities. Head Start Performance Standards and Other Regulations (U.S. Dept. of Health and Human Services, 1999) mandate that children with disabilities participate in Head Start, yet Lindeman and Adams (1996) reported that children with disabilities are often not enrolled. Wolery, Werts, and Holcombe (1994) noted that many of the children identified as disabled display only speech and language delays, rather than more serious disabilities. When children with moderate or severe disabilities are enrolled, it is often on a part-time basis. Zigler and Styfco (1994) suggested that Head Start needs to improve its ability to manage the needs of a diverse population of young children. Fink and Fowler (1997) uncovered impediments to interagency collaboration that include "logistical barriers, divergent philosophical orientations, and lack of perceived parity" (p. 357). Lindeman and Adams (1996) noted that Head Start programs face disparate policies and procedures when attempting to incorporate services to students with serious disabilities. Goodman (1994) suggested that education for preschool children with disabilities is viewed as remedial and more appropriately managed by special education, rather than general education teachers. Thurman (1997) added that there often exists a problem of a lack of "fit" between a child's needs and the ability and willingness of teachers to make accommodations. Butera (1993) reported that most Head Start teachers do not perceive themselves as competent in managing children with special needs, even if they verbalize a positive attitude toward inclusion.

Analysis of project data revealed a visible framework for team collaboration. Children with moderate and severe disabilities were integrated into more classroom activities, Head Start teachers viewed team meetings as useful to them, team collaboration as good for Head Start, and the increased involvement of special education staff as having made a positive change in Head Start. In addition, children with disabilities made measurable developmental gains and their parents indicated satisfaction with Head Start disability services. Head Start personnel expressed enhanced feelings of competence in the ability to manage the needs of children with disabilities. A transition-to-kindergarten process was established that was helpful to the LEA.

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Cultural Continuities and Discontinuities

School, Family, and Community Partnerships for Children's Learning: Responses to Class, Cultural, and Linguistic Diversity

Baljit Kaur, Lynn Gardiner

PRESENTER: Baljit Kaur

During the last decade, New Zealand schools have undergone drastic changes in terms of the make-up of the school population and school-related policies. First, the increasing cultural and linguistic diversity of student population is not matched by similar changes in the teacher population. The latter remains predominantly monocultural and monolingual. Second, there is a clear emphasis on bicultural issues in education arising from the country's explicit commitment to the Treaty of Waitangi. Third, the national educational policy espouses a strong commitment to inclusive education for all children in regular classrooms. Fourth, Tomorrow's Schools initiative (1989) devolved the responsibility for school governance to local Boards of Trustees constituted mostly of parents and teachers. These multifarious changes necessitate that schools and communities work collaboratively at the institutional level to facilitate effective learning for all children, along with the traditionally accepted role of parents supporting their own child's learning (Kaur, 1995).

Despite research documenting the notorious elusiveness of home-school partnerships (Peters, 1997; Powell, 1996; Serpell, 1997; Vincent, 1996), schools and communities across the country are striving to deal with the changing scenario presented by the policy and population changes. Three kinds of responses can be discerned: First, the Government's initiative like Strengthening Families Programme of the Ministries of Education, Health, and Social Welfare provides coordinated preventive services to at risk children and families. Second, responding to the poor school achievement of Maori children, some promising initiatives, such as Tu Tangata, have been started by the Maori communities themselves. Under this programme parents are trained and paid to attend the school regularly, learning alongside their children, supporting their efforts, monitoring their day-to-day progress, and above all, conveying the significant message of valuing schooling to children. Third, some schools are initiating concerted efforts to forge strong and ongoing links with the community through a number of strategies (Kaur, 1994). Recently, one such school, a low-income inner city primary school in the South Island, won Goodman Fielder School of the Year Award, the best school in New Zealand. About 42% of the children in this school are non-White, including 25% Maori. The school in its Charter and Mission Statement reiterates its commitment to "Nurturing all cultures and abilities". This school serves as the primary site for our longitudinal study. The specific aims of this study are to investigate the: (a) skills, strategies, and beliefs that make for effective partnerships; (b) barriers to achieving genuine partnerships in the bicultural and multicultural context; (c) perceptions and lived experiences of the school staff, and the children and families from diverse cultures and classes. The study focuses on partnerships between schools, homes, and communities both at the institutional and the individual levels.

The focus is on identifying the beliefs, practices, and structural arrangements that facilitate collaborations and those that hinder them, such that the strengths and the resilience within families, schools, and communities can be highlighted for wider policy and practice implementation (Gallimore & Goldenberg, 1993). The presentation at the Conference would undertake a comparative analysis of the Government-, the school-, and the community-initiated programmes aimed at ensuring continuity between homes and schools to facilitate the institutional transitions and effective learning for diverse learners.

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Between Worlds: Puerto Rican Mothers' Beliefs and Expectations Regarding Their Head Start Children's Schooling and Language Learning

Mariela Páez

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Puerto Rican children have had a long history of educational difficulties in the American public school system (Nieto, 1995). Research studies that have tried to explain the underachievement of Puerto Ricans and other minority students in the United States have focused on factors related to the family, school, and society. In particular, parental beliefs and expectations about schooling have been found to be important predictors of students' academic achievement (Soto-Soto, 1988; Goldberg & Gallimore, 1995; Fuligni, 1997).

A qualitative study was designed to consider the sociocultural nature of low-income Puerto Rican mothers' beliefs and expectations regarding their children's schooling and language learning processes. The following questions guided the study: (a) What are these mothers' beliefs and expectations regarding their children's schooling and language learning processes? (b) How are their beliefs and expectations connected to sociocultural factors?

The sample was comprised of 12 low-income mothers who identified themselves as Puerto Rican and whose 4- to 5-year-old children were participating in the Head Start program in Massachusetts. Eight mothers were born in Puerto Rico and their length of residence in the

United States ranged from 2.5 to 18 years. Four mothers were born in the United States.

Data were collected through semi-structured individual interviews with the mothers, in Spanish or English. Each interview was approximately 60–90 minutes long. All interviews were audio taped and transcribed. Analysis involved the use of multiple qualitative strategies such as categorization and contextualization (Maxwell, 1996).

The findings of this study revealed that all mothers were optimistic about their children's schooling. Regardless of how many years they had been in the United States or if they were born in this country, mothers thought that schooling was a vehicle for getting ahead and succeeding in this society. The majority of the mothers believed that racial barriers could be overcome with hard work and individual effort. Moreover, all mothers wanted their children to know both English and Spanish. English was valued as an instrumental language; Spanish was seen as an important vehicle for continuing cultural and linguistic traditions.

Mothers' beliefs and expectations were found to be related to their sociocultural background. For example, the mothers who had some education in the United States showed some ambivalence in their trust that schools could provide a good education for their children, while the mothers who were educated in Puerto Rico had idealistic notions about schools in this country. Moreover, mothers' who had higher levels of education held higher expectations for their children's schooling.

Mothers' beliefs and expectations regarding their children's language learning were found to be related to their migration history. Mothers who were born in Puerto Rico and had plans for returning stressed the importance of Spanish maintenance and were more likely to place their children in bilingual programs than mothers who were born in the United States.

This research contributes to our knowledge of low-income Puerto Rican mothers by placing their beliefs and expectations in a sociocultural context. This could help educators better understand how these mothers approach their children's educational experiences.

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Frameworks of Education: Perspectives of Asian American Families and Head Start Staff

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Although America is becoming more culturally/linguistically diverse (CLD), the Asian/Pacific Islander (API) population is the fastest growing bilingual population in the United States (U.S. Census Bureau, 1997). Little knowledge exists, however, about appropriate assessments or interventions for API populations (Cheng, 1987). This presentation reports on Project FRAMES, a Head Start grant investigating the cultural frameworks of Head Start and Asian families it serves.

Frameworks are defined as past knowledge of events that shape interactional rules and meaning (Goffman, 1986). To provide culturally appropriate services to diverse families, practitioners must gather information about families' perspectives regarding child development, learning, and expectations of service providers. Assessing Asian children is as challenging as understanding their families' value and belief systems. When two participants with different cultural communication frameworks interact, misunderstanding and miscommunication may occur, resulting in poor relationships between professionals and families.

Much of the current information about the Asian culture is based on voluntary immigrants (Ogbu, 1992). Information about Southeast Asian refugees is limited to surface details that fail to describe underlying assumptions of their values and beliefs. Poverty, disruption of the family hierarchy, discrimination, and inconsistent application of the model minority stereotype further complicate Asian families' educational experience. Families may have children with learning problems who are viewed as model students, but are never referred for help (Lee, 1996; Pang & Cheng, 1998; Weinberg, 1997).

The Head Start program in this study advertises a multicultural perspective, but struggles to maintain Asian children's attendance and parent involvement. Because Asian children tend to be respectful, obedient, and are learning a second language, and because teachers lack the training to identify CLD children with learning problems, teachers overlook any learning problems the children may have.

A native interpreter and the principal investigator conducted three ethnographic interviews with nine Asian families and four Head Start staff. Interactions among staff-child, parent-child, and staff-parent were observed and recorded. Twelve Asian children's communication skills were observed and evaluated. All Head Start information given to parents (artifacts) was analyzed.

Data were interpreted in individualistic and collectivistic concepts, power relationships, and face issues (maintaining or saving face; Scollon & Scollon, 1995; Triandis, 1995). Parents identified differences between the two educational systems, but were often unsuccessful navigating the American educational system. The parents struggled to maintain their children's native values and beliefs at home, which were in conflict with the teachers' and peers' individualistic values and beliefs at school. Cultural differences of vertical-collectivism and horizontal-individualism were found across the areas of discipline, child development, attitudes, communication, learning, social relationships, and play.

The lack of cross-cultural understanding resulted in underreferral of Asian children; reduced Asian parent involvement; inappropriate service provision; misunderstanding; miscommunication; and conflict between parents, staff, and children. The staff expected individualism from the children, parents, and CLD staff. When parents or children did not respond individualistically, they were judged as less interested or needy of services.

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A Cross-Cultural Analysis of Mothers' Perceptions of Their Roles as Teachers During Everyday Interactions with Their Infants

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Early intervention from birth to age 3 is increasingly common as a way of influencing the development of infants and toddlers. Simultaneously, there is increasing cultural diversity among the families receiving these services. One common early intervention is to teach a family member, usually the mother, to become a teacher of the child. However, each mother's response to an intervention will be influenced by her own beliefs and practices with respect to appropriate parent-child interactions (Rogoff & Morelli, 1989). Parents from different cultural backgrounds may perceive differing developmental goals and benefits from their interactions with their infants (Chao, 1994; Hoffman, 1998).

This poster presents the results of an interview study designed to understand mothers' perceptions of how they value outcomes of parent-child interaction. Analyses for this poster focus specifically on mothers' ideas about teaching within the contexts of joint play with and without objects. Results are presented for seven mothers from each of two cultural backgrounds, White-American and Korean.

The interviews used as the basis for these analyses were conducted in mothers' homes by an interviewer from the same cultural and linguistic background. A process of extensive reading and discussion by a research team was used to derive a set of categories for developmental benefits and for maternal teaching roles.

Six primary types of teaching roles emerged: (a) exposing the child to information and opportunities; (b) encouraging the child by providing emotional support or reinforcement; (c) showing or telling the child the right way; (d) scaffolding by modifying expectations for performance; (e) joining the child's play; and (f) allowing the child to explore alone. The most typical approach to teaching using objects could be described as exposing the child to opportunities. When no objects were present, the most typical approach to teaching was scaffolding. However, differences between the groups when interacting without objects were found in the relative balance between "encouraging" and "showing the right way": White mothers emphasized the former and Korean mothers emphasized the latter. Only Korean mothers talked about showing the right way in relation to social behaviors. Both groups of mothers emphasized cognitive over other types of outcomes, but this was especially true in object play. Meanings within categories also differed somewhat between groups. For instance, whereas "encourage" in the White group of mothers was likely to include direct reinforcement, this was less true in the Korean group of mothers.

These findings suggest that early interventionists should be cognizant of mothers' perceptions of their interactions with their infants when suggesting teaching roles. For instance, suggesting particular types of activities may or may not fit with how the mother perceives her role, and may or may not be directed toward an outcome that she views as important. Mothers' participation in early intervention activities may be highly related to their evaluation of the validity of the particular early intervention approach, based on their perceptions of the congruity between their own beliefs and practices and those inherent in the particular model. The most facilitative approach to intervention will be based on an understanding of individual perceptions.

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Contextual Factors that Support Developmental Transitions: An International Perspective With Examples from Aboriginal/First Nations Programs

Judith A. Colbert

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Contextual factors appear to play a key role in the provision of quality child care in Aboriginal/First Nations settings around the world. This finding emerges from updated research presented in the Child Care Literature Search and Recommendations (Colbert, 1996; 1999), completed in 1994 for Canada's Royal Commission on Aboriginal Peoples (RCAP).

RCAP requested a response to specific questions related to a search of mainstream and Aboriginal literature (including longitudinal studies), as well as sources unique to RCAP (including research, submissions and testimony); an assessment of innovative models of aboriginal care from Canada and elsewhere; and the development of conclusions and policy directions. Answers arose from both the literature search and key informant interviews.

"Child care" was defined as care for less than 24 hours for children under 12. More properly described as early care and education, it ideally responds to four types of need: (a) economic, (b) educational, (c) cultural and linguistic, and (d) social. A "model" includes both a supportive "framework" or system, and specific local programs (Evans, 1990).

The search revealed that most mainstream literature is derived from the United States and focuses on the effects of child care, significance of quality, and context. Findings suggest that the most appropriate care is based on well-designed curricula that meet local needs, is of high quality, accommodates developmental and cultural factors, integrates a number of services, provides for intervention and prevention, and includes links with families and the community.

Outcomes were included from the Consortium for Longitudinal Studies and High/Scope Perry Preschool Study.

In contrast, Aboriginal literature is international in scope and focuses on cultural and linguistic issues, community development, distinctive Aboriginal needs and goals, and strategies in particular communities. Limitations include a lack of both major studies in Aboriginal settings and comprehensive assessments of existing findings, and a preponderance of publications that merely include chapters on Aboriginal child care or cross-national assessments mentioning Aboriginal programs. The exception is New Zealand where Maori child care has been well documented and had influence elsewhere.

RCAP sources revealed concerns about all types of need and the lack of a Canadian framework to provide stability and support, including funding and technical assistance.

The review explored model systems in Kenya (a planned, national system), New Zealand (two national systems: one planned to support Maori language nests; another, unplanned, for mainstream care), and the United States (two national systems, each with distinctive administrative provisions for mainstream and American Indian populations: one system related to the Child Care and Development Fund; the other, Head Start). Model programs emerged from Canada and the United States, including several American Indian Head Start programs.

The results highlighted quality, comprehensiveness, community and parental involvement, and especially infrastructure. They led to recommendations to establish a Canada-wide Aboriginal child care system, an Aboriginal Early Childhood Research Institute, and Interim Advisory and Transition Committees.

Related comments focus on the need to establish infrastructure before programs are in place, and to sponsor research that gathers new knowledge about Aboriginal child care and applies findings from mainstream settings to Aboriginal communities.

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Early Intervention and Child Care Programs and Practices

Descriptive Study of Head Start State Collaboration Projects

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One of the unique features of Head Start is the federal to (local) grantee relationship. Head Start programs are directly funded at the federal level through the Administration for Children and Families (ACF) Regional Offices affording them the ability to design services responsive to the unique characteristics of their communities. Because the direct funding had posed some challenges to Head Start in collaborating with states to provide a seamless array of services to children and their families, the Head Start State Collaboration projects were established.

With the release of the 1993 report of the Advisory Committee on Head Start Quality and Expansion, *Creating a 21st Century Head Start,* Head Start has been actively implementing numerous quality initiatives. Forging partnerships was a major theme of the report. The report made several recommendations about how to develop these new partnerships and also suggested that Head Start play a critical role in several major national reform initiatives, including family preservation and support, welfare reform, education reform, health care reform, and national service. Constructing effective partnerships was even more critical in light of recent welfare reform legislation and its implications for availability of quality child care and health care for low-income children and families.

In 1997, Ellsworth Associates, Inc., of McLean, Virginia conducted a *Descriptive Study of Head Start-State Collaboration (HS-SC) Projects* on behalf of the Head Start Bureau. The study was designed to provide detailed information about the design, management, and accomplishments of all 50 HS-SC projects and successful strategies used to develop partnerships throughout each state service delivery system. An Advisory Stakeholders Panel, consisting of Head Start leaders and researchers, assisted in the design of the study and will provide oversight and planning for the final analysis and report.

Key research questions of the study included:

- To what extent have the projects facilitated the involvement of Head Start in state policies and plans affecting low-income families?
- To what extent have the projects built successful partnerships between Head Start and other state and local agencies?
- To what extent have the projects helped build systems and access to services for all low-income children?
- What effective strategies are used by the projects to develop partnerships?
- What are the common strategic and management challenges experienced by project directors?
- How have the projects evolved over time?

The study design included both qualitative and quantitative components. A case study methodology was used to collect information at nine sites. The remaining 41 sites participated in telephone interviews. The case studies provided rich insight into the operation, organizational culture, and social and political environment of the state, while data from the telephone interviews allowed for cross-site comparisons.

The analysis of data described the activities and achievements of each site and systematically compared and contrasted the programs along key dimensions. The study helped HS-SC Project Directors understand patterns of successful strategies and informed efforts to support and strengthen HS-SC projects.

Primary Prevention Using Related Services Personnel: A Model of Consultation

Deborah Marr, Sally C. Townsend

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Head Start is a federal program specifically designed to help children by enabling them to start school on an equal footing with their more privileged peers. Providing related services helps Head Start meet this objective. Consultation provided by related service personnel is generally focused on children already receiving related service intervention. There is little written about related service personnel using consultation to prevent delays.

A model of consultation designed to prevent delays has been implemented in one Head Start agency for the past 3 years. Occupational therapists visit classrooms monthly to share ideas, make classroom suggestions, and address teachers' concerns regarding students' developmental progress. Goals of this model are to prevent delays and promote the development of all classroom children. The strategies used by the related service personnel include in-service presentations, suggestions to teachers regarding classroom activities, modeling of behaviors and activities, and Home Activity Papers for parents. The domains of concern include fine motor skills, gross motor skills, sensory processing, self-care, cognition, and social skills. The purpose of this study is to examine parent, teacher, and administrator satisfaction with this service.

Ethnographic interviews were used. Head Start administrators, teachers, assistant teachers, family advocates, parents, and children were interviewed to determine their response to this consultation model. The interviews resulted in the following themes about the model:

- It has improved program effectiveness by reducing frustration, writing better lesson plans, and putting developmental and IEP information into practice. The occupational therapist's role as problem solver "has been an incredible resource for me…we were often frustrated about what to do with some of the children's behaviors." A teacher noted, "The kids love it when the therapist comes in. We do a lot of things that she shows us and she even tells the parents about it."
- It has restored Head Start "referral credibility" with local school districts.
- It has improved communication about the children between the administration, teaching staff, parents, and school district. A teacher noted it was helpful to have the therapist talk with a parent to provide "an expert's opinion". That same parent related it was "very helpful to hear about my child's problems from someone else, too." The model can be improved by increasing face-to-face parent education, interaction with family advocates, and helping other related service disciplines move to a prevention model.

The quantitative portion of this study consisted of a parent questionnaire. The purpose of the questionnaire was to determine if parents used the monthly Home Activity Papers and to evaluate their satisfaction with the suggested activities. Return rate was 33%. Results indicate that 96% use the Home Activity Papers. The papers are fun for 97% of the parents, and 96% were motivated to create additional activities to do with their child. Ninety-five percent feel the Home Activity Papers should be used again next school year. Problems noted in implementing the activities are lack of time, child too old for some activities, or difficulty getting the child to participate.

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Intervention Differences in Cognitive and Social Development Among Children in Comprehensive Child Development Program (CCDP)

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The Comprehensive Child Development Program (CCDP) was funded by the Administration on Children, Youth, and Families (ACYF) to test the impact of providing early and comprehensive services to low-income families on children's development and family economic self-sufficiency. CCDP projects relied heavily on a case management approach to provide services, primarily through home visits, for mother and family to promote self-sufficiency, and early education services to promote child outcomes.

The evaluation of CCDP was implemented in 21 CCDP projects, each of which recruited a sample of low-income families and randomly assigned these families to receive the CCDP treatment or control groups. Across the 21 sites, 4,410 families were recruited. Of these, 3,961 families were interviewed or tested at least once. The children's cognitive and social development was assessed annually using: (a) Bayley (1993) at 2 years; (b) K-ABC and Peabody Picture Vocabulary Test-Revised (PPVT-R; Dunn & Dunn, 1981) at 3, 4, and 5 years; (c) CBCL (Achenbach, 1978) and ASBI (Hogan, Scott, & Bauer, 1991) at 2, 3, 4, and 5 years; and (d) Meisels' Work Sampling System (Meisels, Jablon, Marsden, Dichtelmiller, & Dorfman, 1994) at 5 years.

The data analysis plan involved longitudinal analyses designed to test whether children randomly assigned to control or treatment groups in more or less intensive interventions sites showed different development trajectories, and whether treatment effects varied as a function of family characteristics. First, a cluster analysis of the families to identify subgroups of families with different characteristics within this low-income sample yielded a four-cluster solution that emerged in replicated analyses. Second, we created a three-level treatment variable to test the hypothesis that a program with an indirect intervention for children such as a home-visiting program may require a certain level of intensity to be effective. Intensity was indexed by a median split of sites on the average number of home visits per family involving parent education. Third, hierarchical linear model (HLM) analyses tested whether developmental trajectories varied as function of treatment (more intensive treatment group, less intensive treatment, or control group) or family typology.

Results of the HLM analysis indicated the developmental trajectories of treated children in the more intensive parent education sites were significantly higher overall and showed more gains over time than children in the other two groups. Children randomly assigned to treatment in the more intensive parent education sites showed higher cognitive scores than did control children. Furthermore, children in the treatment groups in the less intensive parent education sites showed more declines over time on cognitive scores than did treatment children from more intense treatment sites. Children in the four clusters showed substantially different patterns of cognitive development, but no substantial evidence emerged suggesting that the treatment was differentially effective for children from varying family types.

These results suggest that family focused, case-management interventions can have a modest, but positive impact on children's development when implemented at least marginally well. Finally, these results, when compared to the impact of child-focused interventions such as high quality child care, suggest that child-focused interventions may be more effective in changing child outcomes at least during the duration of the intervention. This study provides further evidence that successful early intervention projects for low-income children are not easy to implement.

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Sure Start: A New Approach to Integrated Services for Children Under 4

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Sure Start is a new program based in the United Kingdom, aimed at very young children living in poverty. The program was designed as a result of the Cross Departmental Review of Provision for Young Children that was led by Her Majesty's Treasury. The review had two key findings: (a) the alarming extent of, and ill effects of child poverty in Britain and (b) the absence of an overarching multidisciplinary strategy designed to meet the needs of young children. As a result of this review, Sure Start was established. It is a major government program, with a budget of

£450 million ($720 million) for England for the first 3 years. Sure Start works by establishing cross-agency partnerships at local level in areas of deprivation. These partnerships audit what services already exist for young children, and then develop a plan to: (a) deliver new services not already available, and (b) reshape current services to ensure that they reach those most in need and work collaboratively. On the basis of these plans, funding is allocated to individual local programs. There will be 250 such programs running by March 2002. Each program covers a catchment area of about 750 children under 4. Program catchment areas are based on poverty data for the area. Within each area, Sure Start services are available to all local families with children under 4. Sure Start expects to reach about 8% of all under-4s in England, which will be about 18% of all under-4s living in poverty in England.

Sure Start programs work to nationally determined objectives and targets set out in a Public Service Agreement (PSA). Each government department develops a PSA in agreement with the Treasury. Sure Start, because it is a cross-departmental initiative (mainly Department of Health and Department for Education and Employment), has its own PSA. Local programs design the inputs required to achieve the targets, based on local need and what services already are in place. This way of working has generated great enthusiasm, as local partnerships feel free to design programs that best fit their circumstances. However, it creates one of many challenges for the evaluation of Sure Start.

Sure Start is planning a significant investment in evaluation. Several features pose problems for the evaluation. Among the difficulties are: (a) the diversity of local programs, (b) the unacceptability of a randomized control trial, (c) the impact of other major initiatives covering the same catchment, and (d) the absence of a core data set of information on children. While Sure Start is a program designed to have long-term benefits, there is significant pressure to achieve quickly measurable results. This also has implications for the design of the evaluation.

Changes in Service Delivery Model and Satisfaction Levels of Home Visitors in an Early Head Start Program

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PRESENTERS: Sukhdeep Gill, Mark T. Greenberg

The Early Head Start (EHS) program initiative allows the program grantees to choose a model of service delivery to achieve the intended outcomes in children, families, staff, and community development. Therefore, agencies offering the EHS program have adopted a range of service delivery models across the nation including home-based, center-based or a combination of the two (Kisker, Love, & Raikes, 1999).

However, several programs are reported to be undergoing changes in their service delivery as a part of their mission for continuous program improvement. The present study outlines these changes in an effort to explain the process of institutionalization of an EHS program in an urban setting. Initially the program offered home visitation to 75 pregnant mothers and families with children under the age of 3. A team of two home visitors worked with each family. An Education Specialist provided weekly visits of 1-hour to 2-hour duration to 8 to 10 families, whereas a Family Specialist visited 12 to14 families for about 2 hours every 2 weeks. Both these partners were expected to work with each family as a team, which required them to be in touch with each other on a regular basis. Difference in their caseload resulted in Family Specialists working with as many as three to four different partners. This created problems of communication and working with their partners in a coordinated manner for effective service delivery.

Interviews with the staff (Gill & Greenberg, 1999) identified a number of barriers to effective service delivery arising from the existing model. Although home visitors reported a high level of communication with most of their teammates ($M = 4.12$), some noted lack of coordination and follow-up in the qualitative interviews. As a result of this feedback, coupled with an internal agency review indicating low number of complete home visits, high family turnover rates, and role confusion in service delivery, the program administration decided to revise the service delivery system in November 1999. They readvertised the home visitor positions, and rehired all but two of the staff members that were interested in working with the revised model of service delivery. An analysis of the staff turnover rate revealed the highest turnover (47%) during the 6-month period following changes in the service delivery model. An analysis of three interviews conducted in October 1998, October 1999, and February 2000 showed a decline in the overall job satisfaction ($M = 3.31$, 3.29, and 2.76, respectively). Of all the home visitors ($N = 16$), nine stayed with the program through these changes. An analysis of changes in their job satisfaction over time showed no significant differences in their level of satisfaction from T1 to T2. However, the change at T3 versus T1+T2 was significant and in the negative direction ($F = 6.32$, $p <. 05$). Planned contrast (T3 versus T1+T2) of individual subscales showed a similar but nonsignificant trend for interpersonal factors, whereas that for job responsibilities was significant ($F = 6.29$, $p < .05$). Implications of these findings for staff development were discussed.

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Addressing the Effectiveness of Head Start: Implementation and Analysis of a Randomized Study

Frances McCarty, Martha Abbott-Shim, Richard Lambert

PRESENTERS: Frances McCarty, Martha Abbott-Shim, Richard Lambert

The Georgia State University Quality Research Center, in partnership with a southeastern Head Start program, conducted a randomized study aimed at examining the impact of the Head Start program in a southeastern, metropolitan community. The purpose of this study was to describe and discuss the implementation and findings of this randomized design research effort with a wide range of outcomes related to school readiness, health, social skills, cognitive skills, and preliteracy skills.

The participants in this study included all eligible 4-year-old applicants and their parents within selected centers of the participating Head Start program. Three centers were selected to participate because the number of families recruited in those communities offered the opportunity to form Head Start and control groups. Random assignment procedures were used to place participants in the treatment (Head Start) or control group (waiting list). Assignments were made at the center level. It was felt that this would serve to strengthen the design by allowing for greater equivalence of geographic and demographic variables for children and families in the treatment and control conditions. Using this randomization procedure, 87 children were assigned to seven Head Start classrooms (Head Start group) and 80 children were placed on the waiting list (control group).

The child measures were administered to the treatment and control groups at three times: September-October 1998, January-February 1999, and late March-early May 1999. The child outcome measures included the following instruments: the Peabody Picture Vocabulary Test-Third Edition (PPVT-III; Dunn & Dunn, 1997), the M-KIDS Preliteracy Inventory (Nurss, 1995), and the Early Phonemic Awareness Profile (Dickinson & Chaney, 1997). The parent measures were also administered to treatment and control groups in winter 1998, with a brief follow-up interview in spring 1999. Information about the child and family was collected using the Family and Children's Experiences Survey (FACES) Parent Interview (Administration on Children, Youth, and Families, 1997).

This study followed a specific analytical strategy, growth curve modeling, which is a special case of hierarchical linear modeling. A two-level model was employed that treated change over time as nested within person in the level one model and person characteristics as predictor variables in the level two model. Three measurements were taken across various outcome measures enabling the researchers to estimate two parameters in the level one model: initial status and growth rate. A predicted growth trajectory was created for each individual, each group, and for the whole sample by estimating the extent to which a time metric could predict performance on each outcome. The time metric in this case was the number of days between the beginning of the school year and the time that each measurement took place.

The growth curve analysis indicated that initial status was equivalent and the growth rates for the Head Start children were significantly faster (statistically) than for the control children on the measures of receptive vocabulary, phonemic awareness, and story retelling. Additionally, the parent report to all health questions about well care, health screenings, immunizations, and dental examinations showed statistically significant differences between the two groups. A significantly greater percentage of the Head Start parents indicated that they had addressed these specific health issues by the spring of the year.

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Early Results: Implementation of a Head Start Effectiveness Study Using Random Assignment

Lawrence J. Schweinhart, Sherri L. Oden, Virginia Okoloko, Ann Epstein, Carol Markley

PRESENTER: Lawrence J. Schweinhart

This research poster presentation shares 1st-year, outcome-based results from an experimentally designed Head Start effectiveness study that has been implemented over the past year and is following up the study participants into their kindergarten year. The study is part of the Head Start Quality Research Consortium, a larger initiative to define, assess, and confirm the effectiveness of high quality program practices in Head Start programs.

A distinctive feature of this study is random assignment of children to either a Head Start group or a Non Head Start group. Specifically, the children were 3- and 4-year-olds eligible for Head Start without discernible disabilities who were not previously enrolled in Head Start. This study examines the effectiveness of Head Start by comparing the developmental and educational outcomes for children and parents who participated in Head Start with a group of comparable children and parents who did not participate in Head Start. It also examines the relationship between program quality, especially staff qualifications and staff development, and child and family development in Head Start.

After we invited Head Start programs throughout Michigan to participate in the study, two programs agreed to introduce random assignment into their Head Start enrollment decision process. With considerable effort, the research team established and closely monitored a set of well-articulated random assignment procedures. A sample of 139 children was identified and randomly assigned, 62 to the Head Start group and 77 to the Non Head Start control group. Ten of the Head Start children (16%) and 39 of the control group children (51%) declined to participate or dropped out of the study, leaving 52 children in the Head Start group and 40 children in the control group. We are comparing the background characteristics of the two groups to ensure group comparability. This study data come from child testing, child observation, teacher ratings of children, parent ratings of children, program observation and assessment, staff interview and questionnaire, and parent interview.

Head Start is and should be engaging in a dual evaluative strategy–evaluation of the national impact of Head Start for the federal audience, especially Congress, and evaluation of the local impact of Head Start programs to ensure that each program is delivering on its promise to the children and families whom it serves. At this writing, the Administration on Children, Youth and Families has issued a request for proposals for a national impact study. Head Start's Technical Work Group on Child Outcomes Assessment is fashioning a national strategy for Head Start teachers to collect data on child outcomes using observational assessment tools. Given the extraordinary difficulties of mounting a successful study based on random assignment, as documented in this poster, the local accountability plans being developed for Head Start may well be the evaluative strategy for the future of Head Start.

A Three Year Evaluation Study of a Bilingual Curriculum Program for Limited English Proficient Hispanic Preschoolers in Head Start

Adam Saenz, Nell R. Carvell, Sylvia Garza, Collette Leyva, Ann Minness,
Salvador Hector Ochoa, Eleazar Ramirez, Mike Rice

PRESENTERS: Adam Saenz, Salvador Hector Ochoa

Findings from an evaluation of a bilingual curriculum used with three different yearly cohorts of limited English proficient and bilingual students in a Head Start Program were reviewed. The impact of first language instruction was highlighted and discussed.

(Abstract from program; poster summary not available for publication.)

Evaluation Methods

The Influence of Selected Variables on Children's 3rd-Grade Achievement: A Comparison of Two Path Models

Sue Vartuli

PRESENTER: Sue Vartuli

The primary objective of this study was to compare two path models, examining variability of five selected variables to see if the same factors influenced successful 3rd-grade achievement of children who attended Head Start and a comparison group of children from low-income families.

The data were collected at one site of the National Head Start / Public School Early Childhood Transition Demonstration Project. Ninety-seven children and their families were in the Head Start sample, and 89 children and families with similar low-incomes were in the comparison group. When children were in 3rd grade, fathers' presence in the home and family income levels were gathered from the family interviews. Family involvement in school was measured by questions from Your Child's Adjustment to School (Ramey & Ramey, 1992) instrument. The questions pertained to parent participation, volunteering for activities, and keeping in touch with school personnel.

The Peabody Picture Vocabulary Test-Revised (PPVT; Dunn & Dunn, 1981) was utilized to measure the children's receptive vocabulary. Four subtests of the Woodcock-Johnson Tests of Achievement (Woodcock & Johnson, 1989) were adopted to provide a standardized means of measuring children's reading and mathematics abilities. Retention in grade, and whether the child had an Individual Education Plan (IEP) for placement in special education services was retrieved from children's school record folders by using the School Archival Records Search (SARS; Walker, Bloc-Pedegro, Todis, & Steverson, 1991). The extent of Transition Program involvement was measured using the Family Goal Setting scores based on individual family development plans. The total number of family contacts was multiplied by the complexity of the family goal and by the quality of the contact.

The Head Start sample model of 3rd-grade achievement produced Comparative Fit Index (CFI; Bentler, 1990) values of 1.00 (Normed Fit Index [NFI; Bentler & Bennett, 1980] = .935), whereas the low-income comparison group sample model produced corresponding CFI values of .994, (NFI = .918). Fit indexes suggested that the model performed well in both samples. In predicting 3rd-grade achievement, the direct effect of kindergarten achievement (positive effect), school success (negative effect), and family stability (positive effect) was significant in both samples. Total effect coefficients for kindergarten achievement was .67 in the Head Start sample and .61 in the low-income comparison sample. Collectively, five variables explained 72% of the 3rd-grade achievement variance in the Head Start sample and 75% of the variance in the low-income comparison sample. A comparison of the two models revealed that there were no significant differences between the two models, χ^2 (16, N = 186) = 16.35, p = .429. The path model appears to explain 3rd-grade achievement equally as well for Head Start samples and for low-income, non-Head Start samples.

Although the study did not substantiate the variability between the two low-income groups on the five selected variables predicting 3rd-grade achievement, the path models performed well with both samples. Kindergarten entry achievement scores, family economic stability, and grade retention and special education placement were significant paths to 3rd-grade achievement for both groups. School practices and policies, and societal interventions must be examined if the continuing economic hardships that many families face are to be overcome.

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Classroom Observations of Head Start Children

Michelle New, Amy B. Lewin, Cheng Shao, Jill G. Joseph

PRESENTERS: Michelle New, Amy B. Lewin, Jill G. Joseph

This study describes the use of a direct observation procedure with Head Start children enrolled in Starting Early Starting Smart (SESS). This program is based in Montgomery County, Maryland and is one of 12 sites taking part in a national prevention research study funded by SAMHSA (Substance Abuse and Mental Health Services Administration) and the Casey Family Program. Children in the Head Start population are at higher than average risk for developing disruptive behavior disorders due to the high rate of risk factors in these families (Webster-Stratton, 1998). Prevention research focuses on early identification of behavioral and emotional problems. Direct observation of classroom behavior is now considered an essential component of research focusing on children at risk for psychopathology (Conduct Problems Prevention Group, in press; Wehby, Dodge, Valente, & The Conduct Disorders Prevention Research Group, 1993). Development of standardized methodology in younger age groups has therefore become an important priority. This paper focuses on direct observation methodology adapted for use with a Head Start population.

The study was conducted in a large suburban county (Montgomery) near Washington, DC. Ninety-six children took part in this phase of the study: 43 (45%) were boys and 53 (55%) were girls. Subjects were observed using a modified version of the Fast Track School Observation System (Wehby, Dodge, & Greenberg, 1992). Three observers were trained to collect classroom observation data. Observers were trained over a 4-week period under field conditions. Over the course of data collection, approximately 12% of the observation periods were randomly selected to assess interobserver agreement. During these periods, another rater collected observational data on the same target child and completed the post observation inventory. Mean percentage agreement for the observational data was 63%, ranging from 40% to 90%. Observations were conducted during a 3-month period and consisted of two 15-minute periods for each child, completed on separate days. The observation system included target childrens's' positive and negative interactions with teachers and peers using a continuous recording consisting of event codes (e.g., teacher positive command, aggression by peers to target child). Event measures focused on the child's level of compliance with teacher commands and with peer interactions. Consistent with the system used in the Fast Track Program, only teacher-initiated behaviors were recorded. Peer interaction observations were used to assess the level of interactions the target children had with their peers. In order to assess more general levels of activity engagement, duration measures were included (Wehby et al., 1993). Duration measures estimated the amount of time a child spent appropriately engaged in tasks or play, as well as the amount of time spent in solitary or disengaged activities. Following each observation period, the observers completed a post observation inventory consisting of questions from the Fast Track Social Health Profile and the Minnesota Affect Rating Scale-Revised (Wehby et al., 1992). Minor modifications were made to the criteria for rating duration and event measures due to the younger age group.

Results will be presented on reliability (percentage agreement) and the relationship between observation measures and standardized measures of child behavior.

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Family Health Model as a Guide of an Early Head Start Program

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PRESENTERS: Rachel F. Schiffman, Thomas M. Reischl, Hiram E. Fitzgerald

The development of a child and their parent is affected by the health of the family of which they are members. Family health can be conceptualized as having multiple components that define it as an organism and as part of an ecosystem. Among these components is a family's coping ability, the interaction among its members, stability in housing and family composition, integrity, resource support, and time management. Families may engage in practices to promote or advance their health, restore damaged health, maintain the current health state, or worsen their health status. In the initial conceptualization of the model, Family Health was seen as a pivotal point affected by the types of support available to the family and by the interaction of the parent and child. The purpose of this paper is the preliminary testing of the relationships identified in the intermediate or central portion of the model.

The sample consisted of 143 families eligible to enroll in the Early Head Start Research and Evaluation Project at the Community Action Agency in Jackson, Michigan. Mothers were on average 22.7 years old (*SD* = 5.0) at time of enrollment. They were predominantly White (76.6%), single (48.9%), and unemployed (33.6%) with almost half (47.0%) having not graduated from high school. There was at least one child in the family, with a median family income of $8,946. The focus children were on average 5.5 months old at the time of the

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assessment (*SD* = 3.8). Demographic and some background data were collected at the time of enrollment. Interviews and observations were conducted by trained data collectors in the home as soon as possible after enrollment (*M* = 2.8 months after enrollment, *SD* = 2.9).

Least-square regression path analyses were used to examine the pattern of predictive associations among family background variables, family resources, social support and social conflict variables, family coping variables, and the parent / child interaction variables. The path analyses were directed by a conceptual model that imposed a causal ordering of family background factors and family resources predicting intermediate outcomes (social support and social conflict, family coping), and all these variables predicting the quality of the mothers' and infants' interactive behaviors. Three similar path analyses were conducted with slight changes in the ordering or selection of final outcome variables. All three analyses suggested that the quality of mother and infant interaction was enhanced by the mothers' knowledge of infant development, and was compromised by the infants' emotionality (temperament) and the amount of social conflict affecting the family. Other path coefficients suggested that family background factors and family resources were associated with social support/social conflict and with family coping responses.

These initial findings suggest the importance of understanding how the interactions between mothers and their infants are affected by other family and community factors. Viewing families as active and developing organisms within broader ecosystems provides a useful lens for understanding these potentially causal dynamics. These analyses also provide direction for how family support programs like Early Head Start can enhance the quality of mother-infant interaction.

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Measuring Family Involvement: A Comparison of Two Methods

Martin J. Ho, Sara E. Rimm-Kaufman, Robert C. Pianta

PRESENTERS: Martin J. Ho, Sara E. Rimm-Kaufman

This study compares two approaches for measuring family involvement: a survey questionnaire and a daily log (Rimm-Kaufman & Pianta, 1999). Most research on family involvement uses surveys where teachers complete questionnaires at a single point during the school year (e.g., Epstein, 1996). Some research uses a daily log method where teachers keep logs of their contacts with families throughout the whole school year.

Our poster addresses three research questions: (a) does teacher-rated family involvement on a questionnaire relate to their reported frequency of contact in daily logs, (b) are the two methods comparable for reporting specific types of contact (e.g., number of family visits to the school, number of times a family member volunteers), and (c) do both methods detect differences in family-school relationships between preschool and kindergarten?

Forty teachers were enrolled in this study (12 preschool, 28 kindergarten). The children were students in two preschool programs designed for "at-risk" children. All teachers logged family-school contacts from September to May and completed questionnaires for the same children and families in May.

Teachers completed survey questionnaires that were comprised of 13 items asking about family involvement activities and family attitudes toward school (e.g., how often does the parent visit the school, how often does the parent volunteer at the school, how interested is the parent in getting to know the teacher?). Ratings for each question ranged from 1 to 5, and analyses were based on a mean across all items.

Teachers recorded each contact with a family member in daily logs throughout the year. The categories recorded included: (a) initiator of contact (e.g., school or home), (b) type of contact (e.g., school visit, volunteering), and(c) topics discussed (e.g., positive, problem behavior). Analyses used number of contacts per month.

We present three findings:

1. There was no correlation between the rate of family involvement as measured by family involvement logs and the degree of family involvement as rated by the teacher questionnaire.
2. For specific types of contact, for example school visits and volunteering, results yielded nonsignificant though moderate correlation coefficients.
3. Both methods found significant differences between preschool and kindergarten. Each method revealed more school visits in preschool than in kindergarten. The daily logs revealed more home-initiated and positive topics discussed in preschool, and more negative topics discussed in kindergarten. The survey questionnaires revealed more parent meetings attended and more interest by parents in getting to know the teacher in preschool than in kindergarten.

Thus, the two methods provide different windows on family involvement. End-of-the-year questionnaires measure teachers' perceptions of family involvement, while the daily logs measure family-school contact. While the two methods do not relate when measuring general contact and involvement, there is a trend toward an association between the two methods for specific types of contact. Both methods show differences in family-school relationships in preschool and kindergarten, though the differences are greater using daily logs, suggesting this method may be a more sensitive measure of these differences. These findings show the importance of careful method selection for measuring family involvement.

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The Evaluation of a Parent-Child Interaction Model in Early Intervention and Early Head Start Settings

Tweety F. Yates, Jeanette A. McCollum

PRESENTERS: Tweety F. Yates, Jeanette A. McCollum

Literature on early development and recommended intervention practice have converged in a focus on children's early relationships and interactions with their caregivers as a foundation for optimal development and learning (Howes, 1998; Lyons-Ruth & Zeanah, 1993; McCollum & Yates, 1994; Regional Education Laboratories' Early Education Collaboration Network, 1995; Sanchez & Thorp, 1998; Uzgiris & Raeff, 1995. Despite the importance of parent-child interaction on early development, this area has received little attention in service delivery. One option that addresses not only the importance of caregiver-child interaction, but also offers an additional service delivery option for families, is the development of parent-child groups. Although some information is available on the implementation of parent-child groups, few resources are available that specifically address the group as an option for programs supporting the development of young children. Hence, early intervention and Early Head Start programs have few guidelines for planning and delivering services in a parent-child group format that is reflective of family-centered values.

This poster presents the preliminary results of an ongoing evaluation of the implementation of a parent-child interaction group model, Parents Interacting With Infants (PIWI), in early intervention and Early Head Start settings. PIWI is based on a philosophy that places the parent-child relationship at the heart of services, emphasizing the reciprocal influence between this relationship and the child's development. The primary outcomes for parents and children are competence, confidence, and mutual enjoyment.

The PIWI model is a systematic way of thinking about early intervention and Early Head Start. It is organized around eight program components: the PIWI philosophy, dyadic relationships, triadic relationships, developmental observation topics, environments, planning, individualizing, and teaming. All components are supported by philosophy-based implementation guidelines as well as by specific practices.

Interview information from administrators, group facilitators, and parents addresses which of the eight model components were easiest to adopt and implement, what worked best, and what kinds of changes/adaptations were made in order to make the model better fit their diverse needs. Preliminary results show that the administrators and group facilitators felt that the easiest components to adopt and implement were the philosophy, dyadic strategies/focus, and triadic strategies. Developmental observation topics was reported as the most difficult to implement. Planning was also reported as difficult, but more from lack of planning time than the actual implementation of planning the groups. Programs reported that the model was working for diverse groups as well as in diverse settings and few adaptations have been made. The biggest strength reported has been the "structure" provided by the PIWI model. It has given programs the "how to" to accomplish what they feel is important for families and children. Family interviews have shown that families feel more comfortable with the groups because they know what to expect and what their role is during the group, and they are having fun while learning more about their child.

The findings suggest that PIWI provides a much-needed structure to help early intervention and Early Head Start providers implement parent-child groups. While they reported that implementation seemed to work better "block by block" when they were first learning the model, they noticed differences with the implementation of each block. It also seemed to take time and support to fully implement the model. All of the programs involved in this preliminary evaluation have chosen to continue using the PIWI model.

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A Comparison of Teacher and Observer Ratings of Head Start Children's Social Competence

Roline Milfort, Daryl B. Greenfield

PRESENTER: Roline Milfort

The goal of this project was to compare two sources of data, (teacher and observer), on preschool children's play interaction, disruption, and disconnection in the context of peer play. Research comparing multiple sources of social competence data for children is useful for at least two reasons. First, these comparisons can help determine which source might be most consistent and reliable for assessing components of social competence using a given measure. Second, this research can provide information on points of convergence and divergence of multiple sources of data as well as identify potential strengths, biases, and limitations of different sources. The three objectives of this study were to: (a) examine and compare the construct validity and reliability of the Penn Interactive Peer Play Scale (PIPPS; Fantuzzo et al., 1995) as a teacher and observer measure using exploratory factor analyses and reliability analyses; (b) examine the relationship between teacher and observer ratings of children's play interaction, disruption, and disconnection using correlational analyses; and (c) examine the congruence in the absolute ratings using variance components estimation.

The sample consisted of 215 Head Start children (107 girls, 108 boys) from 22 Head Start classrooms in five Miami-Dade County Head Start centers. Ninety-two children (42.8%) were African American; 123 (57.2%) were Latino. All of the teachers were female, 7 were African American, and 15 were Latino.

Children were rated by their classroom teacher and a trained independent observer on the Penn Interactive Peer Play Scale (PIPPS; Fantuzzo et al., 1995). The assessments by the trained observers were obtained via classroom observations over a period of 2 to 5 days, 3 hours per day. A random sample of children was observed during activities that involved social interaction with their peers. These activities included "plan-do-review," free play/work time, large and small group activities, outside activities, and lunch time. The classroom teachers were asked to complete the same rating scale on the same children.

The Penn Interactive Peer Play Scale (PIPPS; Fantuzzo et al., 1995) measures distinct aspects of social competence in low-income, minority preschool children both as a teacher and observer rating scale. Teacher and observer ratings on the PIPPS (Fantuzzo et al.) resulted in overlapping factor structures indicating that they categorized similar behaviors as play interaction, disruption, and disconnection. Though the reliability (alpha coefficient) was higher for teacher ratings, observer ratings also categorized disruptive behaviors into two coherent types: (a) nonaggressive disruption and (b) aggressive disruption. Less than half of the teacher ratings of disconnection and disruption were correlated with observer ratings. There were no significant correlations between teacher and observer ratings of children's play interaction in any of the classrooms. The results suggest that even though teachers and observers viewed similar items as play interaction, disruption, and disconnection, in most cases they rated the children differentially on these items. Among those classrooms that showed a relationship between teacher and observer ratings (i.e., significant correlation), there was greater disparity in absolute ratings of play disruption than of play disconnection.

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Using Action Research Methodology to Promote First and Second Language Acquisition in Head Start Preschool Classrooms

M. Jeanne Wilcox, Catherine Bacon, Kathleen M. Murphy, Shereen Thomas, Carolyn Weber

PRESENTERS: Kathleen M. Murphy, Shereen Thomas

Among young children perceived as "not ready to learn" upon school entry, teachers consistently identify language deficiencies as a primary problem (Hart & Risley, 1995). There are two groups of young children who face primary challenges in the acquisition of language-based readiness skills: (a) children who speak languages other than English in the home and (b) children with communication or language disorders. Although research has demonstrated that young children's language development can be promoted through implementation of evidence-based language facilitation strategies in preschool classrooms, recent analyses of educational practices found that research databases have a limited influence on classroom practices. Efforts to enhance the linkage between research and practice have intensified, and one of the promising approaches identified is the research action method. This poster describes how research action methodology was used to promote implementation of evidence-based language facilitation practices in three Head Start classrooms located in Phoenix.

The implemented action research method was conceptualized in three phases, including: (a) focus groups to identify key issues and desired outcomes regarding practice improvements and changes, (b) formation of research action teams in each of three participating Head Start classrooms to develop and implement plans for integrating new practices into pilot classrooms, and (c) identifying the necessary modifications in teaching practices in order to achieve goals. Each research action team included a parent research partner, university researcher, classroom teaching staff, and consulting speech-language pathologists. Regularly scheduled meetings served as the mechanism for: (a) identifying evidence-based practices that facilitate children's language abilities, (b) evaluating the usability and effectiveness of implemented protocols, and (c) making modifications to the process as needed. A combination of qualitative and quantitative measures were collected during the school year to address the extent to which the action research model promoted use of evidence-based language facilitation practices by Head Start personnel and the extent to which children demonstrated gains in their language skills.

With respect to Head Start personnel practices and the classroom environment, pre and post measurements were compared from two data sources, the Early Childhood Environment Rating Scale-Revised (ECERS-R; Harms, Clifford, & Cryer, 1998), and analyses of teacher talk made from classroom videotapes (adapted from Smith & Dickinson, 1994). Results suggest modest improvement in type of activities and interaction as measured by the ECERS-R (Harms et al.); no changes were noted in teacher talk analyses. However, subjectively, teacher participants reported that the regular meetings and implemented activities were beneficial and that the information about language development was valuable.

With regard to the children, a total of 15 children participated, 5 children randomly selected from each of the three classrooms. Seven children had speech/language disorders and 8 were typically developing; 8 children spoke primarily English and 7 spoke Spanish. A comparison of formal and informal tests of language abilities included language sample analyses, Preschool Language Scale-3 (Zimmerman, Steiner, & Pond, 1992); Peabody Picture Vocabulary Test-III (Dunn & Dunn, 1997); and Expressive Vocabulary Test (Williams, 1997); or Expressive One Word Picture Vocabulary Test-Revised, Spanish Edition (Gardner, 1990); and Test De Vocabulario En Imagenes Peabody (Dunn, Padilla, Lugo, & Dunn, 1986). Results suggest children's receptive and expressive vocabulary knowledge improved in their primary language, Spanish-speakers' receptive English vocabulary increased, and general language skills were relatively unchanged.

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Desired Results for Children and Families

Barbara Metzuk, Deborah Montgomery

PRESENTERS: Barbara Metzuk, Deborah Montgomery

The California Department of Education's Desired Results for Children and Family System was presented. This comprehensive, research-based system aims to determine the effectiveness of the Department's child development programs for children birth to 14. Information about program standards, a child Desired Results Developmental Profile, family feedback, program evaluation, and program improvement based on best practices was included.

(Abstract from program; poster summary not available for publication.)

Family Involvement in Children's Education

The Impact of Participation in Head Start Programs on Family Environment

Shulamit N. Ritblatt, Sarah M. Brassert

PRESENTERS: Shulamit N. Ritblatt, Sarah M. Brassert

Head Start attempts to strengthen the entire family unit by providing emotional and informational support to parents under stress. Zigler and Trickett (1978) argue that evaluations of the program should go beyond the individual child to include the impact that the program has on parents. However, there is very limited research on the effects of the Head Start program on the family system and its environment (Zigler & Anderson, 1979; Zigler & Styfco, 1994). The research questions of this study are: (a) Is the family environment impacted by participation in the Head Start program? and (b) What is the relationship between family environment and child outcomes?

Secondary data originally gathered by the Neighborhood House Association Head Start Program of San Diego County were used. The data were collected from Head Start centers that were randomly selected and included families who participated in the program either for 1 or 2 years. Eighty Head Start families completed the required assessment tools and demographic questionnaire. Forty-eight male and 31 female children participated in this study (in one case the gender was not reported). The youngest child was 40 months old, and the oldest was 65 months old ($M = 58$ months, $SD = 5.38$). The families were White (31.3%), African American (25.0%), Latino (25.0%), Asian (3.8%), Biracial (11.3%), and Other (3.6%). Forty-five of the children had been enrolled in the Head Start program for 1 year, and 29 had been enrolled in the program for 2 years (six missing cases). Support-service workers administered the Family Environment Scale (FES; Moos & Moos, 1994), the Child Development Inventory (CDI; Ireton, 1992), and a demographic questionnaire after a preliminary training.

Results indicated that families who had been in the program for 2 years differed significantly from families who had been in Head Start for 1 year on the personal growth domain (χ^2 (2, 29) 6.609, $p = .0367$). Families who had participated in the program for 2 years reported an increased intellectual-cultural orientation, increased active recreational orientation, and placed greater emphasis on organization than those families who participated in the program for only 1 year. A significant relationship was also found between ethnicity and the organization subscale of the FES. African American and Latino families had higher scores on this subscale than did White families.

Examination of child development outcomes in relation to family environment (positive/negative) using ANCOVA analyses indicated no significant differences. Families with a positive environment as well as families with a negative environment had no differences in their children's developmental outcomes as measured on the CDI. The current study clearly indicates that parental involvement with the program impacts the family environment, especially in the personal growth orientation as measured by the FES. In light of the current welfare reform movement, a critical question that must be addressed by future researchers is how parent involvement in Head Start will be impacted by welfare reform.

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The Relation Between Former Head Start Parents' Perceptions of Involvement Opportunities, Parental Efficacy, and Reports of Actual Involvement: Comparison to Non-Head Start Parents

Tina M. Younoszai, Alice Galper, Carol Seefeldt

PRESENTERS: Tina M. Younoszai, Alice Galper, Carol Seefeldt

Programs such as Head Start have mandated parent involvement for poor children, but getting parents involved is increasingly complicated because of the weak endorsement of public schools and welfare reform (Ripple, Gilliam, Chanana, & Zigler, 1999). Nevertheless, Hoover-Dempsy and Sandler (1997) suggest that a major construct influencing parents' decisions about involvement is their sense of efficacy for helping their children succeed in school. This research examines how Head Start parents perceive parent involvement opportunities when their children are in elementary school, and the relationships between these perceptions, their level of efficacy, and their reports of involvement. The responses of former Head Start parents are compared to those of non-Head Start parents.

This study is based on data from a Head Start-Public School Transition Demonstration. Eight schools in a large urban county adjacent to Washington DC participated. The sample consists of 79 former Head Start parents and 62 non-Head Start parents interviewed by trained testers in their native language during their child's 2nd grade year.

Findings indicated that both the Head Start and non-Head Start parents perceived parent involvement opportunities in their children's schools as available. However, the non-Head Start parents consistently reported more activities as being offered by the school than did Head Start parents. Head Start parents also reported significantly more barriers than non-Head Start parents, $t(87) = 1.99$, $p < .05$. Rates of parent involvement and level of parental efficacy also differed among the parents. On average, Head Start parents reported participating in fewer activities and had relatively lower efficacy scores than non-Head Start parents, $ts(103) > 2.10$, $ps < .05$.

In examining the relations between parents' level of efficacy, perceptions of parent involvement opportunities in their children's school, and reports of parent involvement, correlational analyses were conducted separately for Head Start and non-Head Start parents. For Head Start parents, level of parental efficacy was positively related to their perceptions of parent involvement opportunities, and their reports of parent involvement, $rs(67) = .358$ and $.289$, $ps < .05$, respectively. Head Start parents' perceptions of parent involvement opportunities also positively related to their reports of parent involvement, $r(74) = .344$, $p < .01$. Only one of these relations was found for non-Head Start parents. Non-Head Start parents' level of efficacy was positively related to their reports of parent involvement, $r(58) = .460$, $p < .01$.

Results of this study appear to support prior findings relating to Head Start parents' perceptions of parent involvement (Ripple et. al., 1999). While Head Start parents perceive that parent involvement opportunities are offered, they report fewer involvement activities than the more affluent non-Head Start parents. Further, in this study they were significantly less likely to perceive the possibility of participating in influential policy-making roles, and were less likely to say they participated in these roles. Consistent with the work of Hoover-Dempsy and Sandler (1997), parents' level of efficacy was positively related to reports of parent involvement in both groups.

The practical implications are clear. As a matter of policy, schools should promote self-efficacy by offering Head Start parents an array of involvement opportunities while valuing parental contributions. Assistance with child care and transportation, as well as provisions for non-English speaking parents is warranted to further support parents' commitment to their children's schools.

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Parent Involvement in Head Start Classrooms: Findings from an Observational Study

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PRESENTER: Dina C. Castro

The purposes of this study were to determine: (a) the frequency and types of parents' involvement in Head Start programs, (b) the levels of involvement with children when parents participate in Head Start classrooms, and (c) the relationships between parent volunteering and selected parent and teacher characteristics.

Volunteer data were collected from 68 classrooms across three Head Start programs in the southern U.S. Additional data were collected in 33 of those classrooms, including observations of 91 parents in one-hour sessions; 49 of the parents were observed twice (fall and spring). Interviews were conducted at the end of the school year with 71 of those parents. For the observations, a guide was developed from an instrument previously used in another study with Head Start (Peisner-Feinberg, 1997). The parent interview protocol included questions from the Head Start Family and Child Experiences Survey (Westat, 1998) and the School and Family Partnerships: Survey of Parents (Epstein & Salinas, 1993). Sixty eight teachers also responded to a questionnaire about parent involvement beliefs and practices.

Descriptive analyses from volunteer logs indicate that most volunteers were parents (73%). The number of parent volunteers diminished from fall to spring, with a small number of parents participating consistently throughout the school year. Most parents volunteered only one or two times for two hours or less. Data on type of activities indicate that 56% of the time parents volunteered in the classroom; 11% of the time they participated from home (i.e., doing laundry, preparing classroom material); 10% of the time they attended parent meetings; 9% of the time they helped with transportation (e.g., bus monitors); and 6% of the time they helped on field trips. The remaining 7% of the time parents volunteered for fundraising or parties.

Observational results indicate that most of the time parents participated in activities involving low and medium involvement with children. However, the level of involvement with children during volunteer activities increased from fall to spring. The time spent in low involvement activities diminished while the time spent in medium and high involvement activities increased. Significant correlations indicate that teachers with more experience working in Head Start had more parents volunteering in their classrooms ($r = .47$) and more total volunteer hours ($r = .40$). As expected, parents who were employed were less likely to volunteer in the classroom ($r = -.37$). Mothers with more years of schooling were less likely to volunteer in Head Start ($r = -.21$). However, among mothers who volunteered in the classroom, those with more years of schooling tended to participate in activities that involved more interaction with children ($r = .27$). Comparing self-reports to the volunteer logs, teachers were fairly accurate reporters of parents' volunteering in their classrooms ($r = .44$), while parents were less accurate ($r = .29$).

Results from this study suggest that as a strategy to increase parents' involvement in Head Start, more experienced teachers should work closely or mentor novel teachers to share strategies for obtaining parent participation. Also, different and creative ways of parent involvement are needed to encourage working parents to participate.

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Parent Involvement Types as Predictors of Reading Achievement for African American Third Grade Children Who Attended Head Start

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The present study addressed the issue of which types of parent involvement have the greatest effect on reading achievement at the 3rd grade in African American children who participated in Head Start at the preschool level. Using Epstein's model (1986), five distinct types of parent involvement defined as: (a) parent's obligations as a parent, (b) home-school communication, (c) volunteering at the school, (d) child learning at home, and (e) decision making were investigated. Head Start parents are encouraged and given the opportunity to become involved in all these areas. It is important to determine whether these forms of involvement continue into public school (Seefeldt, Denton, Galper, & Younoszai, 1998).

The sample consists of 150 (82 female) low-income, African American 3rd grade students (mean age of 9.1) and their parents, all of whom consented to be part of a larger study: the National Head Start Public School Transition Demonstration Project (Kagan & Neuman, 1998). Data were collected from parents using the Family Involvement in Children's Learning (Ramey & Ramey, 1992) questionnaire. Reading achievement was assessed on children using the Peabody Picture Vocabulary Test-Revised (PPVT-R; Dunn & Dunn, 1981) and two subsets of the Woodcock Johnson Achievement Test, Revised (Woodcock & Johnson, 1989): Letter-Word

Identification and Passage Comprehension. A multiple-regression analysis was conducted on the parent involvement types for each language measure. Parent's volunteering at the school had the only significant effect related to the child's receptive vocabulary scores, as measured by the PPVT-R ($p = 0.002$).

Volunteering at the school involved participating in activities sponsored by or held at the school, including attending student performances; acting as a room parent; helping out in the classroom; library, computer lab, or office; going on field trips; and other school related activities or functions. Parents who reported participating in a number of these events had children with better receptive vocabulary skills. These data are important because knowing that parent involvement is critical is much less useful than knowing which facet of parent involvement is most helpful for the child's education. With such information, schools and their communities can encourage parents to become involved in a particular aspect of their child's education. This study confirms that the parent's role in the school is an important factor in the education of the child. By volunteering in the classroom the parent is more aware of what the child is learning at school and may, therefore, be able to model this in the home. The parent also interacts regularly with the teachers and the administration, feeling more comfortable to confront them about any problems the child may be having, as well as strengthening their own communication skills. Parents who consistently interact with these professionals are likely to increase both their ability to listen and their vocabulary. It is, therefore, important to get low-income parents into the schools for their own benefit as well as their child's benefit.

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Early Head Start Participation Levels of Difficult and Easy to Engage Families

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PRESENTERS: Fredi Rector, Susan Spieker, Joanne Solchany, Kathryn Barnard, Maggie McKenna, Leslie Keller

This poster presents the preliminary findings of a study of a subset of the program participants who were identified by home visitors as easy or difficult to engage in program services. It was expected that initial working models of attachment would influence the working alliance with the program and moderate the influence of the program across families. Home visitors were asked to identify participants on their caseload that they considered to be easy or difficult to engage in services in order to learn if there were characteristics of program participants that impacted their chances of remaining connected to services, or if there were aspects of the program that impacted a participant's likelihood of remaining connected to the program. This study builds on previous work regarding this subset of participants (Solchany, 1999; Spieker, Solchany, Barnard, & McKenna, 1998a; Spieker, Solchany, McKenna, DeKlyen, & Barnard, 1998b).

Home visitors identified 11 participants as difficult to engage and 10 participants as easy to engage in services. These two groups were compared on a number of variables, including: parenting, child development, stress, psychological adjustment, level of program participation, home visitor change, engagement in research protocols, and services provided. Preliminary results indicate that families identified as easy to engage participated in more than twice as many visits as those identified as difficult to engage. Both groups had experienced serious trauma and loss in their lifetimes including experiences like being a victim of abuse or the death of a parent.

The current results represent approximately 30 months of program participation. The data reflect what is currently known about the level of participation of this group of Easy to Engage (ETE) and Difficult to Engage (DTE) families. During home visits the home visitors were expected to work with parents to increase parent-child attachment (Communication Coaching). Specific developmental protocols were established for use during home visits. The ETE families participated in nearly twice as many visits that included parent-child intervention protocols than the DTE families. It is also interesting to note that the 14- and 24-month Bayley (1993) scores were also higher on average for the ETE families than for the DTE families.

The findings from this study have important implications for practice and staff development. Engagement with participants is critical in order to impact the parenting behavior of Early Head Start parents in a positive manner. Home visitors and administrators alike need to be aware of the potential challenges they face in working with these very high-risk families. It is important to use all available resources to develop creative responses to resistant and disorganized participants. Home visiting is often stressful, thus home visitors need to structure time for support and case consultation. Program administrators need to give the message, "We are here for you and your family." Likewise, program administrators need to develop creative and effective ways to reduce staff turnover and improve staff development.

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Family Literacy

Training Fathers to Develop Reading and Writing Skills in Young Children With Disabilities

Robert W. Ortiz, Stephen W. Stile

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During the 1990s, adult illiteracy has been one of the major public concerns in the United States (Marvin & Mirenda, 1993). Paralleling this concern is an increase in attention of early childhood leaders toward emerging literacy paired with matching adult facilitating behaviors (Brueggeman, 1998). The emerging literacy perspective suggests that economically disadvantaged homes may contribute to the literacy problem because they often lack environmental factors correlated with literacy, such as availability of printed materials and writing utensils, and adult-child interactions with literacy materials (Marvin & Mirenda).

Children with disabilities living in impoverished environments face even greater risks in relation to literacy development because of low parental expectation levels. For example, Light and Kelford-Smith (1993) found that parents of young children with disabilities ranked making friends and development of communication and self-care above literacy development while parents of their nondisabled peers gave literacy a higher priority.

The literature documents the importance of parent involvement in relation to children's educational achievement (Wilson, 1991). In particular, parent involvement has had important short-and long-term effects in the area of literacy development (Morrow, 1997). While early childhood leaders have long encouraged participation of mothers, they have only recently begun to assert a need to involve fathers (McBride & Rane, 1997).

The purpose of this presentation is to describe a model for training fathers in early literacy development. Although many writers include listening, speaking, and thinking in their definitions of literacy, we have delimited it to print literacy (i.e., reading and writing).

Step one in our training model is recruitment. Early childhood personnel can expand literacy activity of fathers and their young at-risk and exceptional children by explaining the benefits of male involvement, suggesting appropriate activities and materials, and by sharing expectations. Expansion of male involvement is especially important in inclusive early childhood settings where research has only recently begun to focus on literacy of younger children with developmental delays or disabilities (Cousin, Weekley, & Gerard, 1993; Patzer & Pettegrew, 1996).

Step two is authentic observation (Trussell-Cullen, 1996). In this step, we observe fathers and children as they interact in their environments. This step employs Brueggeman's Early Literacy Scale (1998) to identify emerging child behaviors in traditional domains as well as response and initiations to language used in books, songs, and so forth, and the adult's matching facilitating behavior. The observer checks items on the scale and records anecdotal notes.

The remaining steps in Project DADS are the training approaches for providing early literacy activities. These include: (a) early social interaction, (b) reading and writing, (c) incidental preliteracy activities involving environmental print, (d) technology, and (e) school involvement.

Trussell-Cullen (1996) has suggested, "The foundations of literacy are laid at home during the early years" (p. 176). In our presentation, we will provide a rationale for involvement of fathers in providing these foundations, describe the Project DADS training model, and list research questions for future investigation. On the basis of our presentation, we hope that interested participants will replicate Project DADS at home to promote early literacy activities among local fathers and their young children with disabilities.

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Project FLAME: A Model Family Literacy Program to Self-Sufficiency

Flora V. Rodriguez-Brown

PRESENTER: Flora V. Rodriguez-Brown

Research has shown that Latino parents have definite theories about schooling and their role in their children's education (Delgado-Gaitan, 1992). The concept of *familia* in cultural descriptions of Latinos (Abi-Nader, 1991) supports the view that meeting the needs of the family is one of the greatest motivations for success and achievement within the Latino community. Project FLAME (Family Literacy: Learning, Improving, Educating) was developed in 1989 as a collaboration between the University of Illinois at Chicago, the Latino community, and schools (Shanahan and Rodríguez-Brown, 1993).

Research shows that it is important for parents to be partners with the schools in their children's literacy learning in order to support higher achievement levels for their children (Epstein, 1991). Differences in communication style, views of literacy, and the nature of literacy interactions between the home and the school can limit literacy learning (Heath, 1987). By increasing the opportunities to learn and use literacy outside the schools, particularly at home, the incongruency between home and school literacy can be decreased (Moll, Amanti, Neff, & Gonzalez, 1992).

Project FLAME's goals are to improve and increase parents' ability to: (a) provide literacy opportunities for their children (literacy opportunity); (b) act as positive literacy models (literacy modeling); (c) initiate, encourage, and extend, their children's literacy learning (literacy interaction); and (d) relate well with the school (home-school relations).

As such, through FLAME parents learn about such activities as choosing books for their children, using the library, developing a home literacy center, and using the community to learn literacy. Parents learn to share books with their children; play with rhymes and language games; teach letters, sounds, and words; and encourage emergent writing, among others. Parents also visit classrooms and talk with their children's teachers. These activities support the literacy opportunity, interaction, modeling, and home-school relations components, which are the core of the project design. Through the program parents also attend English as a Second Language or basic skills classes.

Analysis of parent reports about uses of and attitudes toward literacy at home show significant changes in the areas of literacy interaction and literacy opportunity after participating in Project FLAME (Rodríguez-Brown, Li, & Albom, 1999). These changes appear to impact children's school performance. Children, from 3- to 6-year-olds, are pre and posttested to determine if our work with the parents has an effect on the children's learning and their preparedness for school. For this purpose, children are given a letter recognition test, a test of print awareness (Clay, 1993), and the Boehm Test of Basic Concepts (The Psychological Corporation, 1986). The tests are administered in either Spanish or English, depending on the children's proficiency in those languages. Statistical analysis (e.g., t-tests) show significant gains (< .001) from pre to posttest in all areas tested (Rodríguez-Brown & Meehan, 1998).

Home-school collaborations such as Project FLAME bring together parents, schools, and communities. Through the program, parents develop a sense of self-efficacy as their children's first and most important literacy teachers. Above all, Project FLAME is a program that supports the whole family.

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Family Literacy for Low-Income and Immigrant Families: A Case Study of Interprofessional Collaboration

Joy C. Phillips

PRESENTER: Joy C. Phillips

Interprofessional collaboration is a phenomenon about which little is known. Despite an increasing number of state and national policies that mandate education, health, and human service organizations to collaborate—and a widespread belief that such a practice is desirable—little research evidence exists to support these claims.

The purpose of this research study is to contribute to the knowledge base on interprofessional collaboration by providing ethnographic data from one such project. The site of this case study is a school-community collaboration initiative for family literacy known as the Travis Family Learning and Career Center (TFLCC) located in a rural community in central Texas. This collaboration grew out of a Head Start Family Service Center Initiative begun in the early 1990s. The study focuses upon the adult Learning Center because that component of the collaborative was considered to be the "heart" of the collaboration. This project is deemed to be "successful" and has received widespread local, state, and national recognition, in addition to continued support from Head Start. Staff of the local Head Start program provide the primary leadership for the collaboration.

TFLCC is an interconnected set of educational and human services aimed towards families who are poor, many of them recent immigrants from Mexico. TFLCC is not an independent agency. Rather, it is an entity supported collectively by staff and resources from multiple organizations. Organizational partners in the collaboration include a Community Action Agency (the grantee for Head Start, Early Head Start, Even Start), a Consolidated Independent School District, a local Workforce Development Board, a private for-profit government contractor, an adult education cooperative, and a state university. Although this community model is widely considered a "successful" example of collaboration, no definitions or measures of success have previously been suggested by practitioners or scholars.

This study utilized the qualitative methods of ethnography and case study research methods to provide a detailed description of one specific setting. Data were collected from staff and adult family members through in-depth phenomenological interviews, life history interviews, and informal conversations. Field notes were collected from staff meetings, adult education classes, and parent-child activities. Reports, student projects, copies of legislation, videotapes, and other artifacts of TFLCC were examined. Additionally, staff and adult family members were engaged with the researcher in a process of participative inquiry.

The findings from this study of collaboration include a detailed analysis of the organizations and key participants of TFLCC and a multiple perspective examination of the meaning of "successful" collaboration. The study was analyzed according to Laswell's (1971) theory of social process. The results of the study suggest that "successful" interprofessional collaboration projects undergo a set of five developmental stages. Until now most of the attention has been focused on the early stages of convening a group (stage 1) and setting a common goal (stage 2). This study contributes to our understanding of the more advanced, complex stages of development of collaboration including the design and implementation of an integrated service delivery system (stage 3), the establishment of a unique service delivery environment at the direct service level (stage 4), and the assessment of effectiveness of the collaboration (stage 5).

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Reading Skill and Recollections of Early Reading Experiences: Effects of Literacy-Learning Context and Gender

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PRESENTER: Kelly B. Cartwright

Early experiences with print and the contexts in which they occur shape individuals' perceptions of themselves as readers and are significantly related to later reading skill (Bus, van Ijzendoorn, & Pelligrini, 1995; Solsken, 1993). Self-perceptions are also affected by developing gender identities (Chodorow, 1978). This is problematic because literate activities are traditionally perceived as "feminine" pursuits (Cummings, 1994; McKenna, 1997; Solsken). Thus, boys may view reading as "not appropriate for self" and be less likely to engage in literate activities (Labercane & Shapiro, 1986; Solsken). Morawski and Brunhuber (1993) showed that adult proficient readers recalled learning to read: (a) earlier in childhood, (b) at home, and (c) with a parent or family member, while remedial readers recalled learning to read: (a) later in childhood, (b) at school, and (c) with a teacher. This research was designed to investigate potential sex differences in adults' reading recollections.

Forty-eight college students completed three subtests of the Woodcock Reading Mastery Tests-Revised (Woodcock, 1987): Word Identification, Word Attack, and Passage Comprehension. Participants were directed to think of their earliest memory of learning to read and report the context, persons present, and their age and feelings at the time. Participants who recalled learning to read with a parent identified more words correctly than those learning to read with a teacher, $t\ (45)$, $p = .041$. Similarly, participants who recalled learning to read at home identified more words correctly than those learning to read at school, $t\ (44) = 2.14$, $p = .038$. MANOVAs indicated significant Sex X Environment, $F\ (1, 42) = 5.79$, $\mathrm{p} = .021$, and Sex X Person Present, $F\ (1, 43) = 5.43$, $p = .025$, interactions for word identification. Males who recalled learning to read at home scored significantly higher on Word Identification than males who recalled learning to read at school, $t\ (21) = 2.23$, $p = .013$. Males who recalled learning to read with a parent or family member scored significantly higher on Word Identification than males who recalled learning to read with a teacher, $t\ (22) = 2.65$, $p = .015$. No differences were found for females.

These results corroborate Morawski and Brunhuber's (1993) finding that recall of literacy-learning context is significantly related to reading skill. This study also suggests sex differences for these effects where men who recall learning to read at home with a parent demonstrate significantly higher word identification skills than men who recall learning to read at school with a teacher, while women show no differences in reading skill for literacy-learning context. Early reading experiences occurring with parents in the home may therefore be especially important for boys' literacy development. Although few studies have investigated the question of differential early literacy experiences for boys and girls, research indicates that parents provide more opportunities for linguistic interaction and reinforce language use more often with girls than with boys (Fagot, Hagan, Leinbach, & Kronsberg, 1985; Leaper, Anderson, & Sanders, 1998). Clearly, additional research needs to address specific questions of contextual differences in early literacy experiences for girls and boys.

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Attrition and Retention in a Family Literacy Program for Low-Income Latino Parents

Hengameh Kermani, Helena Janes

PRESENTERS: Hengameh Kermani, Helena Janes

This study examined issues affecting attrition and retention of low-income Latino parents in a 3-year family literacy intervention program. Initially, this project experienced a lack of success and high dropout rate (40%). However, this poor success was subsequently transformed into a 95% retention rate and a high degree of community support for the project.

Implemented in several local state-funded preschools, the program served 197 low-income Latino families, most of them recent immigrants from rural areas of Mexico and Central America. These caregivers had an average 4th-grade level of schooling in the sending countries. Fifty bilingual undergraduate tutors were trained to work with the families. At the outset, the program was designed to teach low-income caregivers how to read illustrated storybooks with their preschool children: Mastery of a specific set of story construction goals was the initial program objective. Mastery was measured by video and audiotape pre and posttests; data were also gathered over 3 years from screening, exit and informational participant surveys and interviews, as well as tutors' and researchers' field notes and observational records.

The 3-year data collection was combined and analyzed for retention and attrition. Of the 197 parent participants 79 (40%) dropped out of the program in the 1st year. A variety of reasons were provided by parents for dropping out, of which the most commonly cited were: communication barriers, personality mismatch, misunderstanding of program, and lack of familiarity with literacy conventions of children's books.

In the 2nd year several adjustments to the program were made to reduce the dropout rate. The following modifications were implemented: (a) better parent networking, (b) clearer orientation, (c) availability of parent liaison, (d) on-going observations, (e) integration of parents' interactional patterns, (f) goal setting by parents, (g) providing leadership opportunities, and (h) adapting instructional models to meet each family's literacy needs and strengths. These modifications to the program reduced the dropout rate from 40% to 20% in the 2nd year and 5% in the 3rd year.

In order to investigate factors affecting the success rate, data on 30 parents who had completed the tutorial sessions were randomly selected for analysis. Among the factors responsible for parents' retention were: (a) perception of the program as informative; (b) attainment of status, power, and responsibility; and (c) access to membership in a larger community.

We believe this increasing success rate can be attributed to a large extent to the incorporation of the participants' own teaching and learning models: the adaptations implemented in the original intervention framework made it more appropriate for a population whose familiarity with printed materials was limited. According to Heathe (1986), parent involvement programs have little chance of long-term success if they are perceived by the participants as an imposition of external values. In the literacy program described, participants' positive response increased significantly due to their active control of the program goals. When their ideas were heard and their interactional traditions were respected, parents felt recognized as equals and motivated to become active partners in the transmission of literacy. The development of this program and the process by which modifications were adopted should serve as an object lesson and hopefully as a model to those designing or implementing similar projects to ensure a higher success rate.

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Family Structure and Functioning

Characteristics of Families Involved in Two Early Head Start Programs in Diverse Pennsylvania Communities

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PRESENTERS: Celene E. Domitrovich, Sukhdeep Gill

The Pennsylvania State University Prevention Research Center is currently involved in two collaborative relationships with Head Start grantees. Both agencies commissioned evaluations of their Early Head Start (EHS) program from the Prevention Center. The first center is located in an urban community and serves a heterogeneous group of families that are approximately 32% White, 57% Latino, and 11% African American. The second program is in a rural farming community and serves primarily White families. The purpose of this poster was to present a profile of the families entering EHS programs at both locations and to compare the demographic characteristics and general functioning of the program participants across a number of domains. Data from the rural location were unavailable but will be included in the final presentation.

The majority of the participants in the urban EHS program evaluation were female (97%). There were only four fathers who were interviewed. Approximately one fourth (22%) of the participants were married, but the greater proportion was single (67%). The mean age of the group was 25 with a range from 15 to 39. English was the primary language spoken at most of the homes (74%), but a sizable portion of families reported that Spanish was their primary language (26%). This was not surprising given the greater proportion of Latino families in the urban program.

The mean yearly income level for participants was $9,750. A greater number of individuals were unemployed or stayed at home (66%). One third (34%) of the sample had a job or were involved in some educational or training opportunity. Only 17% of the participants were high school graduates. A larger proportion reached high school but did not graduate (57%), and 8% had less than a 9th grade education. Seventeen percent of the sample had taken some college classes.

As anticipated, the majority of the applicants in the urban sample (65%) reported elevated levels (a total score greater than 16) of depressive symptomatology on the Center for Epidemiological Studies–Depression Scale (CES-D; Radloff, 1977). Chi-square analyses were conducted to determine whether these symptoms were related to any demographic characteristics such as income level, education, or race. None of these variables were significantly related to CES-D scores, but there was a marginal trend ($p < .09$) for unemployed individuals to be more depressed.

Although psychological adjustment was not associated with the demographic markers of poverty, it was related to the degree to which participants in the EHS program felt a sense of mastery over their lives and their beliefs about interacting with their children. Applicants were asked to complete the Pearlin Mastery Scale (PMS; Pearlin, Menaghan, Lieberman, & Mullan, 1981) and the Beliefs Regarding Talking and Reading Scale. Both of these measures were correlated with the CES-D. Individuals with elevated depressive symptoms felt less control over their lives and were less likely to recognize the importance of talking and reading to their child.

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Families of Head Start Children: What Do We Know?

Delar K. Singh, Geraldine Donovan, Lynnette Haley

PRESENTERS: Delar K. Singh, Geraldine Donovan, Lynnette Haley

This study looked at the diverse family systems of Head Start children. With the underpinnings of Family Systems Theory, it specifically addressed the following main research questions:

1. Do families of African American and White Head Start children experience parenting stress?
2. Is perceived lack of parental competence associated with child related stress in families of African American and White Head Start children?
3. Is there a relationship between African American and White mothers' perceived level of parental competence and educational level?

From the lists of county Head Start centers, 70 families ($n = 70$) of African American background and 70 families ($n = 70$) of White background were randomly selected from a total of approximately 500 families. A table of random numbers was used to make the selection. The data were gathered with Parenting Stress Index (PSI; Abidin, 1995), a standardized tool that identifies the needs of families with young children. The internal consistency of PSI is .90 and test retest reliability is .96. Families also responded to a Demographic Questionnaire developed by the principal investigator. Mothers responded to the PSI and Demographic Questionnaire during their routine visits to the respective centers. Filling out of questionnaires took 20-25 minutes of their time.

The analysis of data indicates that a majority of the families of African American and White Head Start children experience parenting stress which is within the normal range of stress experienced by all of the parents. Further, a strong positive/direct relationship exists between perceived lack of competence and child related stress for African American mothers, and a modest positive/direct relationship exists between perceived lack of competence and child related stress for White mothers. That is, those African American and White mothers of Head Start children who feel more incompetent as a parent feel more stressed. And finally, there is a trend for African American and White mothers with more education to feel competent as a parent.

The findings of this investigation should be interpreted with caution because of the following main reasons. First, the nonrespondents may have differed from the respondents in significant ways. Second, the findings of the study are based on maternal perceptions. Maternal perceptions are important, but do not necessarily reflect family realities. And lastly, participating mothers represent Niagara County Head Start. Because of various geographical/programmatic differences, the participating mothers may differ from the families of other geographic regions.

For a better understanding of the families of Head Start children, there is a need to replicate this study in different regions/programs. Also, data for this investigation were collected at the end of the Head Start year. It might be beneficial to collect data from mothers at the beginning of the year and then again at the end of the year. This type of data collection is likely to yield strong evidence as to the impact of Head Start on its families. Head Start programs need to continue to support the parenting task of the families of Head Start children. Also, Head Start programs need to continue encouraging mothers to strive for higher levels of education.

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The Role of Family Functioning on Children's Attention Regulation in Head Start Families

Dena H. Dossett, Barbara M. Burns

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Through parental guidance and instruction, children learn what aspects of their environment are important, and they also learn that they should direct their attention to gather that information. For successful attention regulation, children may need to be taught by caregivers, or more capable others, how to monitor their use of strategies and make decisions about the effectiveness of those strategies. Still, there are many other factors, both environmental and internal characteristics, which have been identified as playing important roles in the development of young children's attention regulation skills. Previous work has investigated cultural differences in parents' teaching and interactive styles with their children, and their associated cognitive outcomes (Carr, Kurtz, Schneider, Turner, & Borkowski, 1989). For instance, low-income families that provide intensive early education child care and responsive stimulating care have been found to be associated with more optimal patterns of cognitive development in children (Burchinal, Campbell, Bryant, Wasik, & Ramey, 1997).

The purpose of the current study was to examine the influence of caregiver characteristics on the development of attention regulation skills of children. Sixty children between 4 and 5 years old, who attended a local Head Start program, and their parents/guardians participated in the study. The amount of direction provided by the parent was assessed in relation to their child's performance on a joint problem-solving task and compared to their performance on an independent problem-solving task. Parental directiveness was significantly related to their children's performance on both the joint and independent task. Greater directiveness was associated with more attempts at solving the puzzle jointly and lower success at solving the puzzle independently. Higher levels of success at solving the puzzle independently were related with higher levels of attention focusing by children.

The impact of parental belief systems and home organization was also compared to children's attention regulation in the problem solving tasks and their temperament styles. Parents who attribute little control to themselves during interactions with children were more likely to have children who rated high on levels of impulsivity. While parental beliefs about control were not significantly associated with their directiveness with their children in a problem-solving task, higher levels of directiveness were related to lower levels of children's attention shifting. Higher levels of home disorganization were associated with higher ratings of activity levels in children and more attempts at solving the puzzle jointly. In sum, parental characteristics were found to have an impact on their children's attention regulation skills. Further research should explore the "goodness of fit" between parental styles and the characteristics of the individual child.

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Children From Which Particular Family Clusters Benefit Most From Early Intervention?

Dylan L. Robertson, Arthur J. Reynolds

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While the deleterious effects of long-term family poverty have been well documented (Hill & Sandfort, 1995; Mcloyd, 1998), relatively few studies have investigated the relationship between familial variations within economically disadvantaged families and children's outcomes (Ramey, Ramey, & Lanzi, 1998). Little is known about why children respond differently to economic disadvantage. Addressing this concern, past research using cluster analysis has identified six distinct family types (Ramey et al.), three parent types (Gill, Reynolds, & Pai, 1995) and four family typologies (Robertson & Reynolds, 1999) that were related to discernable differences in child outcomes. Differential responses to both poverty and intervention outcomes suggest that key variations within economically disadvantaged families influence early intervention goals and children's educational attainment.

The present study examined familial variation among 1,130 low-income families (95% African American) who have been evaluated prospectively in the Chicago Longitudinal Study (CLS; Reynolds, Bezruczko, & Hagemann, 1999). The study sample is 73% of the original sample of 1,539 children who graduated from government-funded kindergarten programs in high poverty neighborhoods in central city Chicago in 1986. The original sample consisted of 1,150 children who participated in the Chicago Child-Parent Center (CPC) program during 1983-89. The CPC program provides up to 6 years of center-based child development and family support services to low-income children from preschool through 3rd grade. Another 389 children, who serve as a comparison group, participated in alternative early education programs in Chicago. For the present study, variables were selected from CLS data from parent interviews, student and teacher reports, and school and juvenile justice administrative records. Variables were limited to defining characteristics of the family before child age 14. A cluster analysis was performed on 16 variables selected from CLS data. The variables selected were based on commonly used family descriptive variables and past theory and research on family clusters (Gill, et al., 1995; Ramey, et al., 1998; Robertson & Reynolds, 1999).

Four distinct clusters or typologies were identified. Cluster 1 families (older, non parent) were likely to be more than 40 years old when the study child was born. Over half the children living in this family typology were doing so without a parent. Adults in this family cluster were also significantly more likely to experience health problems or disabilities. Cluster 2 families (most traditional) were significantly more likely to be two parent families and more likely to have parents or caregivers who were relatively older and more educated. Respondents from Cluster 3 families (most disadvantaged) reported the greatest number of school moves and the lowest rates of full time employment. They also exhibited the lowest educational expectations and parent involvement. Respondents in Cluster 4 families (most advantaged) reported significantly higher levels of education relative to all family clusters except the most traditional. Additionally, they exhibited the highest amounts of educational expectations and parent involvement. The percentage of variance in educational attainment explained by the cluster groups ranged from

566

4.5 to 9.4 (before and after adjusting for covariates). Covariates included kindergarten math scores, parent education, and free lunch eligibility.

Overall, significant differences existed in educational outcomes according to family cluster membership. The pattern of results was similar for highest grade completed and high school completion rates. Relative to the most traditional clusters, children in the most advantaged clusters performed significantly better, while children in the most disadvantaged clusters significantly under performed. This pattern also held for boys and girls.

There was limited evidence that the effects of early intervention differed according to family typology. The effects of CPC preschool participation on high school completion were greater for boys of the most disadvantaged cluster group than for the boys in other cluster groups ($p < .09$). Disadvantaged boys with CPC preschool experience were 63% more likely to complete high school than similar disadvantaged boys without CPC preschool.

The pattern for highest grade completed was somewhat different. Children from Cluster 3 families (most disadvantaged) with any CPC preschool intervention performed .37 standard deviations better than children in this cluster without preschool ($p < .003$). The CPC preschool effect was even larger for disadvantaged boys (.49 *SD*, $p < .004$). The effects of CPC preschool intervention on highest grade completed for disadvantaged boys suggests that disadvantaged boys may have benefited more from the program. However, cluster by program interaction terms were only marginally significant for boys ($p < .08$). Overall, cluster group by program interactions did not add a significant amount of variance to the regression models.

Findings provide further support for the existence of four distinct family clusters in the Chicago Longitudinal Study. Cluster group membership accounted for a significant amount of variance in children's educational attainment by age 20. Moreover, cluster group membership was significantly associated with educational attainment above and beyond family education and socioeconomic status.

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Family Structure and Its Relationship to School Achievement and Social Skills in Former Head Start Students

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PRESENTER: Janice N. Cotton

The purpose of this study was to determine if the academic achievement and social skills of 2nd-grade former Head Start students varied as a function of family structure. Past studies focusing on achievement and social skills have produced varied results (Blum, Boyle, & Offord, 1988; Entwisle & Alexander, 1995; Ganoug & Coleman, 1993; Gringlas & Weinraub, 1995; Krein & Beller, 1988; Lassbo, 1994).

The reading and mathematics scores on the Woodcock Johnson Psycho-Educational Battery (Woodcock & Johnson, 1977) and teacher and family scores from the Social Skills Rating System (Gresham & Elliott, 1990) for approximately 4,000 students were examined. The following family structure households were used to analyze the data: (a) single female (n = 1,620), (b) single male (n = 61), (c) two parent intact (n = 1,753), (d) stepfamily (n = 429), and (e) extended family (n = 220).

Analyses of the reading and mathematics scores showed the groups were fairly equivalent. The reading scores (letter-word identification and passage comprehension) ranged from 97.4 (single male) to 100.7 (two parent intact). The mathematics scores (calculations and applied problems) were also very similar, with a range of 97.7 (single female) to 100.3 (single male). It is interesting to note that the highest reading scores were in the three family structures where there are two adults in the home. It is possible that the lack of resources available to single parents may limit the time they spend reading with or to their children. It is also interesting that children living in single male households had the lowest reading score, yet they had the highest mathematics score.

Differences in teacher and family ratings of children's social skills were found. Teacher scores for all family structures were in the average range, with two parent intact having the highest mean score of 100.9 and single female the lowest mean of 95.9. The difference in scores between two parent intact and single female households was significantly different (p = .000). Overall, teachers viewed the children as being more socially competent than did the families, with the exception that the mean score from single male households was about 2 points higher than the teachers. Family mean scores ranged from a high of 100.8 from single male households and a low of 92.5 from extended families. The single male household score was at least 5 points greater than the scores from single female, stepfamily, and extended families.

Teacher and family ratings of problem behaviors again showed differences. For every family structure, teachers thought children had more problem behaviors than did the families. The biggest discrepancy in mean scores (about 9 points) was found between the ratings of teachers and families in the single male households. In other words, single males considered their children to have fewer problem behaviors than did the parents in other family configurations. Teachers thought children from two parent intact families had the least problem behaviors. Despite the differences, both teacher and family scores on social behaviors and problem behaviors were in the average range.

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Teen Mothers and Their Caregivers: A Comparative Study of Needs, Challenges, and Strengths

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PRESENTERS: Maureen O. Marcenko, Fredi Rector

This symposium presents the initial results of a home visiting model for Early Head Start teen parents ($n = 70$) and their children who were living with an adult caregiver ($n = 62$) in a low-income, urban community in Northern Philadelphia. The teen parents and their adult caregivers were interviewed in their homes and the results are reported here.

The mean age of these African American teen mothers was just under 18 years (17.62). Most (54) of the teen mothers had given birth to their babies. The median family income was between $6,001 and $9,000. Both groups were asked about services or assistance that they might need. The top priority for teen parents was a job for themselves or their baby's father (86%), and for their adult caregiver it was money to pay bills (66%).

Sixty percent of the adult caregivers were receiving public assistance cash benefits. Approximately 49% (30) of the adult caregivers were employed at least part-time and most were single (82%; 51). These families had limited capacity to improve their financial situation. Less than 50% of the adult caregivers had graduated from high school. The average highest grade completed for the adult caregivers was 10.34 and for the teen mothers, 9.97, of which most (76%) were enrolled in school.

Temporary Assistance to Needy Families (TANF) limits teen parents' access to public assistance for financial support. Therefore, participants were asked about their level of knowledge and concern regarding TANF regulations. Of the caregivers, 13% did not believe they were informed about TANF, but were not concerned about this. Eleven percent of the teen parents were not informed about TANF or concerned about these changes. Only 25% of the teens believed they were well informed about TANF.

The Adult-Adolescent Parenting Inventory (AAP; Bavolek, 1984) was administered at intake. This 32-item survey measures the degree of agreement parents have with maladaptive parenting behaviors (Bavolek). The items are clustered into four constructs: (a) Inappropriate Expectations, (b) Empathy, (c) Corporal Punishment, and (d) Role Reversal. Parents are classified as having potentially problematic parenting behaviors, average parenting behaviors, or positive and nurturing parenting beliefs and behaviors in each of the four constructs. In all areas the teen parents exhibited average or above average parenting attitudes and knowledge. The adult caregivers exhibited problematic parenting attitudes and knowledge in three of the four areas.

Their attitudes and knowledge about corporal punishment were average. Apparently the teen parents were accessing parenting education in school.

The coping ability of the teen parents and their adult caregivers was measured with the Family Crisis Oriented Personal Evaluation Scales (F-COPES; McCubbin, Larsen, & Olson, 1991). The results are very encouraging. Both the teen parents and their caregivers demonstrated the ability to cope effectively in stressful situations. Self-esteem of the teen mothers was measured using the Hare Self-Esteem Scale (HSS; Shoemaker, 1980), which indicated that the teen parents in this sample have low self-esteem.

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Health and Nutrition

Willingness to Care for Children With Chronic Infections in Day Care Centers: Frequency and Associated Factors

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PRESENTERS: Young Juhn, Eugene Shapiro, Paul McCarthy, Kim Freudigman

The purpose of our study was to determine what factors are associated with child care directors' willingness to care for children with HIV infection, HBV infection, or asthma. This was a cross-sectional survey. A list of all licensed CCC (child care center facilities with more than 12 attendees) and large family child care homes (7-12 attendees) was obtained from the Connecticut Department of Public Health. From 1,555 licensed CCC or large family child care homes in Connecticut, 115 were randomly selected using a table of random numbers. A letter was mailed inviting the directors to participate in the study. One to 2 weeks later, the directors were called and a questionnaire was administered by phone to those who agreed to participate. A dependent variable was the director's willingness to care for children with HIV or HBV infection or asthma in their child care centers, defined by the answer to the question: " Would you care for a child with the following problems in your child care centers?" For independent variables child care directors were asked questions about demographic and other characteristics of the child care centers and child care directors.

Of the 100 directors, 58%, 23%, and 95% responded that they would care for children with HIV infection, HBV infection, and asthma, respectively. Directors who responded that they would allow their own child to be cared for with children infected with HIV or HBV, respectively, were much more likely to respond that they would care for children with either HIV (88% vs. 31 %; $p < .0001$) or HBV infection (65% vs. 4%; $p < .0001$). Presence of written guidelines about the illness was related to willingness to care for children with HIV (10% vs. 0%; $p < .05$). The willingness to care for children with HIV infection was also associated with their level of understanding about HIV infection ($p < .001$). Variables that were found to be statistically significant in bivariate analyses were entered into multivariate logistic regression models predicting willingness to care for HIV or HBV infected children. Directors who responded they would allow their own children to be cared for in centers with HIV-infected children (*OR*: 15.5, 95%; *CI*: 4.6-53), presence of written guidelines for caring for HIV infected children in the child care centers (*OR*: 22.3, 95%; *CI*: 1.02-48.6), and level of understanding of HIV infection (*OR*: 1.2, 95%; *CI*: 1.1-1.3) remained statistically significant in a multivariate model predicting willingness to care for HIV infected children. Directors who responded they would allow their own children to be cared for in child care centers with HBV infected children (*OR*: 28.4, 95%; *CI*: 6.3-128) remained statistically significant in a multivariate model predicting directors' willingness to care for HBV infected children in their own center.

A substantial proportion of directors of child care centers reported that they would not admit a child with either HIV or HBV infection to their centers. Health guidelines about chronic infections for out-of-home child care programs should be available to CCC. Education about HBV and HIV infection may influence the director's willingness to care for children with these infections.

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Picky Eaters: Relating Parental Perceptions in Fruit and Vegetable Consumption

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During the preschool years, the rapid weight gain of infancy and toddlerhood levels off. Activity levels increase and appetites may decrease. In their quest for independence, children develop their own taste preferences (Birch, 1979). Parents whose infants have previously consumed everything in sight may now find their youngster decisive, opinionated, and even "picky" when it comes to food consumption (Satter, 1987; Wilkoff, 1998; Dietz & Stern, 1999). According to Carruth et al. (1998), picky eaters limit the number of food choices, are unwilling to try new things, totally avoid some food groups, and exhibit strong food preferences. The level of fruit and vegetable (F&V) consumption, in particular, is a concern of nutritionists, as well as the focus of a national goal termed "5-a-Day" (Kurtzwell, 1997), and is a concern for young children during this "picky phase."

The purpose of this study was to evaluate the relationship between parents' perceptions of what kind of eaters their children are and their actual consumption of fruits and vegetables. We looked at the relationship between the children's likes and dislikes of specific fruits and vegetables and how much they actually consumed.

Questionnaires were distributed to parents of children in Head Start programs and in our university laboratory preschool. We asked parents: (a) to rate their child on a scale of 1 to 5 (picky, fussy, fair, good, or very good eaters), (b) to give reasons why they put their child into that specific category, (c) to list fruits and vegetables liked and disliked by their child, and

(d) to list how many servings of fruits and vegetables were consumed daily by the child. Completed questionnaires were obtained from 55 Head Start families and 75 lab school families.

Only 15% of the Head Start children were designated as picky eaters, versus 31% of the lab school group. The children's preference data showed that Head Start children liked fruits and vegetables more than did their lab school counterparts. However, analyses indicated that fewer than half of the children in either group were consuming five F&V servings per day—just 38% of the Head Start and 44% of the lab school children. Interestingly, more Head Start parents rated their children as better eaters (good or very good) than did the lab parents, that is, 62% versus 43%. For the Head Start children, a rating of "better" eating was correlated with liking more fruits and vegetables ($p < .01$), yet most of the children were not eating "5-a-Day." For the lab school children there was no significant association between liking fruits or vegetables and eater ratings.

Head Start parents reported that their children enjoyed a wide variety of fruits and vegetables, listing numerous favorites of each, with shorter lists of dislikes. However, their lesser intake speaks to the need for nutrition educators and food service personnel to develop strategies to increase consumption of F&V in this population, as well as in all preschool children.

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Children's Teeth and Children's Health

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The Action for Boston Community Development (ABCD) is the largest Head Start sponsoring agency in New England. Its overall mission is "to promote and implement the philosophy of self-help and self-sufficiency for the people and neighborhoods." The Head Start's Health Team is entrusted with fostering "an environment where individuals gain a better understanding of comprehensive health and safety practices" (ABCD, 1999).

In 1998, the ABCD began a study of the children's oral health status, enlisting the assistance of the faculty at the Forsyth School for Dental hygienists with whom Head Start has a standing partnership. Founded in 1916, the School is the oldest hygiene school in continuous operation. Its goal is to educate hygienists who are scientifically oriented, clinically competent, and have a sense of community responsibility. The School implemented its Oral Health Education and Promotion Program in Head Start in 1997 and has since been providing age-appropriate oral health education to the children, their teachers, and parents.

The study began with an examination of the children's dental forms that had been completed by dental providers following children's dental examinations and returned to Head Start. A data collection instrument was designed and pilot-tested. Data collection activities were carried out by the student hygienists, under the guidance of the faculty and Head Start Health staff. Once calibrated, students were assigned in groups of four to each site. A total of 747 health records in 6 of the 23 sites were reviewed in 1999.

The examination of the 506 fully complete and acceptable dental forms revealed that about 40% of children required on average 2-3 dental visits, and 15% needed total rehabilitation, including removal of vital tooth tissues and placement of protective crowns. These findings, compatible with existing research (Brown, Wall, & Lazar, 2000; Edelstein, & Douglass, 1995; Mattila, Rautava, Sillanpaa, & Paunio, 2000; Vargas, Crall, & Schneider, 1998; Goldberg, 1999) confirm that children who are predominantly from poorer families exhibit a higher percentage of decay than their peers and disproportionately suffer the health consequences of untreated cavities. The remaining 241 health records with absent or incomplete dental forms serve as a testimony to neglect and noncompliance, as well as the more frequently mentioned barriers to oral health care, such as lack of dental insurance, scarcity of pediatric dentists, and shortage of dental Medicaid providers (Edelstein, 1998; Isman & Isman, 1997).

These preliminary findings also demonstrate that many of our parents are unaware that dental disease is infectious and that sick mouths can cause serious problems in young children, from rare heart damage to "failure to thrive" (National Institute of Dental Research, 1998). Consequently, cavities are left untreated until the pain brings suffering children for emergency, extended, and much costlier treatment. Ironically, dental decay, by general acceptance, can be prevented with a combination of fluoride and sealants. While fluoride protects the smooth surfaces of a tooth, the grooved and irregular chewing surfaces can be made impenetrable to decay-causing bacteria by using a plastic coating called sealant (Selwitz, Nowjack-Raymer, Driscoll, & Li, 1995).

Our data collection and analysis are ongoing and this study is still in its exploratory stage. However, it is apparent that the health safety net for our Head Start families has big holes when it comes to dentistry. A new approach for channeling oral health care beyond the present illness-oriented model, including a broadening of the scope and depth of oral health promotion activities is direly needed.

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Two Years Apart is Baby Smart

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Presenting the development and implementation of "Two Years Apart is Baby Smart," this poster session highlights the Florida Family Planning Medicaid Waiver campaign. Using a theme of spacing pregnancies for at least 2 years and linking the spacing with healthier outcomes for infants and moms, the persuasive message was designed for Medicaid eligible clients. The public health message on birth control is appropriate for any population, a consideration when a media campaign extends beyond the target audience.

Rates of unintended pregnancy and teenage pregnancy in the United States rank among the highest in Western nations. In the United States, 2.9 million of the 59.4 million women of childbearing age (15-44) live in Florida.

Florida received approval in 1998 from the federal Health Care Financing Administration (HCFA) to begin providing family planning services to women losing eligibility for Medicaid. Reducing unintended pregnancies in Medicaid clients by enabling women to obtain family planning services, the waiver can also reduce the costs of Medicaid perinatal services in Florida and improve health outcomes for pregnancy and birth.

To be eligible for services, a former Medicaid recipient must have received, within the previous 2 years, a postpartum service reimbursed by Medicaid. Making family planning methods available for a longer period of time increases the interval between pregnancies, if clients use birth control methods.

According to Gest, Hopkins, and Thompson (1999, p. 2), 48% of live births in Florida in 1996-97, were the result of an unintended pregnancy. One result of unintended pregnancies is a short interval between pregnancies, which has been associated with adverse perinatal outcomes. Siblings born less than 2 years apart are more likely to be premature, low birthweight, stillborn, or die within the 1st year of life.

The Florida media outreach campaign is directed to recipients of a Medicaid paid postpartum service, who are now eligible for Medicaid reimbursed family planning services. Eligibility for family planning services extends for 2 years and includes diagnosis and treatment of sexually transmitted diseases and related pharmacy services.

A professional advertising firm was engaged to design, market test, and produce materials for the media campaign. All phases of media design and production were supervised by the Chiles Center, in consultation with the Florida Department of Health and Agency for Health Care Administration. The media campaign, "Two Years Apart is Baby Smart," integrated television and radio spots recorded in English and Spanish; culturally diverse client brochures printed in English, Spanish, and Creole; provider brochures; multi-racial billboards and bus placards.

A 5-year evaluation of the family planning waiver began with assembling baseline data including interpregnancy intervals, birth outcomes, and health care costs for prenatal, postnatal, and newborn expenses. Women, eligible for family planning, but who did not access services, will be contacted for an in-depth telephone interview. A client satisfaction survey will identify barriers and strengths of the program and the outreach media campaign. Findings can provide guidance for policymakers about family planning waiver outcomes, resource allocation, and suggest directions for future research.

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Head Start Children's Nutrition Socialization Experiences

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Some preschoolers may be at risk for overweight and obesity. To garner insight into the prevention and treatment of childhood weight problems, preschool children's nutrition socialization experiences were examined at home and at Head Start. Forty-six parent-child pairs and eight Head Start teachers participated. Children were weighed and measured; parents completed measures of child eating behaviors, their beliefs about child nutrition, and their family mealtimes; teachers reported their beliefs about child nutrition and were observed during mealtimes. Although there were no differences between the obese and nonobese preschoolers' eating behaviors, parent nutrition beliefs, and family mealtime practices, correlations among these factors indicated that some children might be at risk for later weight problems. For instance, parent reports of negative practices, such as hurrying children to eat, using food to punish, and requiring children to clean their plates were associated with higher child weight-for-height.

Conversely, parent knowledge of healthy child nutrition was associated with more pleasant mealtime experiences, fewer nonoptimal mealtime practices, and less troublesome child eating behaviors. Mealtime observations at Head Start revealed a developmentally appropriate and predictable mealtime environment. In line with the ADA's position on nutrition in child care programs, Head Start's dining arrangements were attractive, comfortable, and wholly supportive of healthy eating. Teacher behavior during mealtimes revealed some strengths and some missed opportunities for promoting children's nutrition socialization. Similar to Nahikian-Nelms' findings (1997), direct nutrition teaching was infrequent; on average, teachers offered educational information about once every 15 minutes. General conversation and encouraging children to taste different foods occurred about once every 5 minutes. The majority of teachers' nutrition-related behaviors focused on naming foods. Whereas naming foods helps familiarize children with different items, stopping the discussion at naming alone falls short of challenging preschoolers' thinking skills.

Preschoolers enjoy sorting and classifying things, and teachers can encourage children to exercise these skills with simple games and activities that involve classifying foods into food groups. General conversation during mealtimes could be used to plan cooking activities or to talk about children's meals at home. These proactive strategies engage children in learning about nutrition and may reduce the need for adult reprimands. Teachers' negative behaviors occurred less frequently than their positive efforts. The most frequent practice involved verbally reprimanding the children; these episodes occurred about 1.5 times each 5 minutes. Reminding children of mealtime rules when they first sit down to eat may help children control themselves and result in a pleasant mealtime environment. As trends in child nutrition programs have shifted from a focus on preventing dietary deficiencies to broader, long-range views of promoting healthy eating practices, the interplay of social, cognitive, and biological processes becomes more critical in our quest for practical knowledge. Although this study has its clear limits (e.g., small sample, limited generalizability, absence of data on child experiences in other child care settings), it underscores the importance of nutrition education programs for parents and teachers of preschool children.

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Maternal Health, Child Health, and Attachment Security

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The purpose of this study was to investigate maternal health, child health, and attachment in the early years of child life. This research focused on maternal physical health, as opposed to maternal mental health such as depression, and child outcomes. During the age range of 25-44 years, a prime time for raising children, many parents experience impaired physical health, and approximately 35% of deaths result from medical conditions (National Center for Health Statistics, 1994). The literature regarding parental physical health/illness and child functioning has received minimal attention with only a few studies to date (Armistead, Klein, & Forehand, 1995). There is also a significant lack of research investigating the role of parental physical health on child health and attachment security. Accordingly, the purposes of this study were to explore the relation between maternal physical health status and (a) child health status during each of the infant's first 3 years of life, and (b) child attachment security at 36 months. A third purpose was to examine the relation between child health status during each of the infant's first 3 years of life and security at age 3.

The sample included 111 mothers and their healthy newborn infants who were participants in a large multisite longitudinal study. Families were predominantly non-Latino, White, and middle class. The dyads were visited at home when the infants were 1-, 6-, 15-, 24-, and 36-months, and contacted by telephone every 3 months between visits to obtain information about maternal and infant health. Every 3 months, mothers were asked the question: "During the past 3 months, how would you describe your and your baby's health? Poor, fair, good, or excellent?" At 36 months, mother and child were observed in the lab during a separation and reunion episode modeled after the Ainsworth Strange Situation (Ainsworth, Blehar, Waters, & Wall, 1978). Infants were classified in the four categories: insecure avoidant (A), secure (B), insecure resistant (C), and unorganized (D). In this investigation, two categories were computed: secure (B), and insecure (A, C, D).

A series of Repeated Measures ANOVAs with security at 36 months as the independent variable, time of assessment —every 3 months during a given year—as the repeated measure, and maternal health/infant health as the dependent variable were conducted for each year.

Overall, findings showed that maternal health for the first 3 years of their children's lives was consistently associated with security of attachment at 36 months. This relationship was not found for child health and attachment security, indicating in this study that maternal health is an important factor in resulting child attachment, even more crucial than the child's health. Significant positive correlations were found between maternal and child health, indicating that a relation exists between health status for both mother and child. It is concluded that maternal physical health may be an important factor in the development of attachment security.

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Home/School Continuities and Discontinuities

Parent/Teacher Attributes and Home-School Connectedness in an Urban, Low-Income Sample

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Despite widespread agreement that both families and schools are major influences on children, only recently have these two contexts been considered linked or interconnected, creating a subset of relationships. Yet, relationships between parents, schools, and communities appear to be crucial to children's academic achievement (Bierman, 1996; Eccles & Harold, 1996; Epstein, 1996; Lichter, 1996). Children with encouraging and involved parents have better academic attitudes, higher motivation, and more often succeed in school (Connors & Epstein, 1995). The importance of home-school links may be even more evident among children at risk for problems in school. Children at demographic risk more often come to school with inadequate preacademic preparation, poor social skills, and/or problems with self-regulation (Comer, 1988). According to Alexander and Entwisle (1996), the lower achievement of some children from low socioeconomic backgrounds could be improved by getting their "outsider" families more involved in school activities. Positive home-school links appear to benefit children; however, little research considers how these connections evolve. Presumably, both teacher characteristics (Eccles & Harold; Epstein; Gomby, Larner, Stevenson, Lewit, & Behrman, 1995) and parent resources (Eccles & Harold) contribute to the home-school connection.

The purpose of this investigation was to examine relations among key teacher and parent characteristics and home-school connectedness. Key variables included: (a) family demographics, (b) maternal psychological functioning, (c) differences between mother and teacher beliefs about learning, and (d) teacher classroom behavior. Some 75, 1st- and 2nd-graders from urban, low-income families were visited in their home when children were 7 to 7½ years old. Separately, the child's classroom was observed and ratings were made of the child-centeredness and supportiveness of the teacher, and teachers completed a set of questionnaires. The home-school connection was defined in terms of: (a) any volunteering or attending of school functions by the mother, (b) no negative contact with the school, and (c) regular educational support in the home.

Quality of home environment was found to be the single moderate predictor of the home-school connection. Modest predictors of the home-school connection were mother and teacher report of child externalizing problems, frequency of family residence changes, and teacher report of relationship problems with the child. Maternal factors (i.e., I.Q., educational level, race, depressive symptoms) were not directly related to the home-school connection, and neither was child I.Q., child internalizing problems, differences between teacher's and mother's educational values, teacher classroom behavior, or how positively the teacher-child relationship was viewed.

Regression analyses indicated that the quality of the home environment contributed the most unique prediction to the home-school connection. Quality of home environment may be an indicator of dysfunction in the family (e.g., family violence, parental substance abuse) of relevance not only to child interpersonal functioning, but also to connections between home and school. Other consistent predictors were frequency of family residence changes, which may also indicate family problems, and mother and teacher reports of child behavior problems. Finally, mothers of girls tended to have a stronger home-school connection than mothers of boys.

Results indicate that teacher classroom behavior does not tell us about the home-school connection. In other words, warm, supportive, and cognitively challenging teachers do not necessarily promote strong connections between home and school. Other data do show, however, that parents would be more involved if teachers nurtured home-school links (Epstein, 1996). Although our results suggest that families with problems (those with acting out children and frequent moving) are least connected to their child's school, it seems that the majority of these urban, low-income families do attempt to create a positive bond with the school. Undoubtedly, we could be doing more within our schools (and our Schools of Education) to promote parental involvement in their children's education.

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Rural Parents' and Providers' Perceptions of a Head Start Family Child Care Program

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There is considerable literature on parents' perceptions of early childhood services in Head Start, although less information is available on a new option combining Head Start with family child care. Providing comprehensive children's services in this manner seems ideal for the rural context where home-based child care by both relatives and nonrelated persons is more prevalent. (Atkinson, 1994; Shofner, 1986) This multimethod study's purpose was to gain understanding of combining Head Start and family child care from the experiences of rural parents and caregivers.

The sample included all of the families and providers participating in the 1st year of Home Start, a combined Head Start and Family Child Care Program in a rural county in the Northeastern United States. Seven families and five providers agreed to participate. The average age of the study children was 4.2 years. The child care provider's experience ranged from 4 to 20 years.

Data collection included semistructured interviews of parents and providers, observations of the study child's play in the child care home, and observation of the child care home using the Family Day Care Rating Scale (FDCRS; Harms & Clifford, 1989) An event sampling method was used to collect data on the child's "favorite play" activities as defined by the parent. Interview data were analyzed for themes and the preliminary findings received "member checks" from the parents and providers. The child observational data were analyzed for: (a) the relationship of the event to the parent interview, and (b) the complexity of the play in terms of social interaction with peers and type of play. The FDCRSs were scored computing a total mean score from the seven subscales. The FDCRS scores for each home were "5" and above, indicative of good quality.

Results of the parent interviews indicated Home Start enhanced child rearing and parenting. Child rearing themes included: (a) the value of continuity in the child's preschool experiences, (b) the importance of meeting goals for academic and social preparation for school, and (c) the importance of individualizing. Parenting themes included: (a) continuity in family needs for both child care and Head Start, and (b) the value of ongoing, regular, and personalized communication between parent and provider. Provider interview data echoed the value of close relationships with parents and ongoing communication. Providers revealed the Home Start Program supported professionalism. Home Start offered continuity in their individual career path and valuable professional support. Child observations yielded important insights into the continuity of children's play from home to child care. The activities included symbolic or pretend play, and interactions with peers during favorite activities were complex, involving associative and cooperative play.

Within the context of quality care with experienced providers, important insights were gleaned about continuity in care for the child and family. Parents and providers combined to offer the children complex play and social interactions others have found appropriate to 4-year-olds and important for learning (Brewer & Kieff, 1996/1997; Smith & Dickinson, 1994). Further exploration is recommended on continuity for parents and providers in the goals for academic learning as well as favorite play activities.

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Parent and Teacher Definitions of Learning in Young Low-Income Children

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PRESENTERS: Dale C. Farran, Garrett Lange, Carolyn Boyles, Laura Flower

Children in 11 different Title 1 designated schools were videotaped in their prekindergarten and 1st-grade classrooms at a time when they were expected to be working on their own. Videotapes were distilled into 30-second vignettes and compiled into a video assessment system that allowed individuals to rate children's involvement and thinking strategies and to predict their future school success based on the behaviors exhibited. This instrument, Young Children in Classrooms (YCC; developed by the authors in 1998), consists of 12 prekindergarten vignettes and 12 1st-grade vignettes. Vignettes were chosen to represent different levels of involvement and different types of activities. Involvement levels and task type were counterbalanced for ethnicity and gender.

Respondents totaled 119: 30 prekindergarten teachers, 38 1st-grade teachers (both groups of teachers were from Title 1 designated elementary schools), and 51 parents of children who had attended Title 1 preschools. In each group the overwhelming majority of respondents were females (97% of teachers; 92% of parents); teachers in both groups averaged more than 12 years teaching experience. The average age of the children was 6.9 years, with a range from 5 to 9 years.

Parents and teachers viewed prekindergarten children similarly. Major differences emerged in the ratings of the vignettes filmed in 1st grade. Parents viewed those video clips much more positively. They rated involvement significantly higher than the prekindergarten teachers did (but not higher than the 1st-grade teachers), and they rated the children as thinking significantly harder and being more likely to succeed in school than either of the two groups of teachers did.

In terms of the effect of gender on the ratings, parents and teachers did not differ from one another in their ratings of prekindergarten males and females except in the area of future school success where parents were significantly more positive than the teachers. At 1st grade, parents consistently gave significantly higher ratings to the female vignettes for involvement and thinking and higher ratings to both gender groups on predictions of future school success.

Ratings were affected by the ethnicity of the vignette as well. At the prekindergarten level, ratings of the three groups of respondents were similar for White and non-White children on involvement and thinking, but parents gave significantly higher ratings to White 1st grade children for how hard they thought the child was thinking and future success in school.

Parents and teachers appear to have both agreements and disagreements in their views of the learning behaviors of young children. All of the adults were more positive about younger children and lowered their ratings of involvement, thinking, and school success of the 1st-graders. Parents, however, remained consistently more positive than teachers particularly with regard to the future. The ratings appear to have been affected by the gender and ethnicity of the child being observed with parents being predisposed to females and White children. This assessment system is available for others to use.

Understanding How Teachers Rate Children's Problems

Joan I. Vondra, JoElla Lukon, Shira Cohen-Regev

PRESENTER: Joan I. Vondra

Success in the first grades of school has implications for continued success in school (Alexander & Entwisle, 1988; Bloom, 1964; Ladd & Price, 1987). However, child characteristics other than ability level play a role in early success (Alexander, Entwisle, & Thompson, 1987; Pianta, Steinberg, & Rollins, 1995). Child race, cultural differences, and teacher perceptions of both child classroom behavior and the teacher-child relationship predict changes in performance, and promotion, versus retention, to the next grade, controlling the initial level of child performance.

The purpose of this investigation was to explore correlates of teacher ratings of child behavior problems, as well as discrepancies in the behavior ratings made by teachers versus mothers. Key variables of interest were demographic information about the teacher, child, and classroom, differences between teachers and mothers in beliefs about what is important for children's learning, parent involvement in schooling, teachers' perceptions of their relationships with the target children, and observed teacher and child behavior in the classroom. Fifty-six of 87, 1st-and 2nd-graders between the ages of 6 and 7, from urban, low-income families were observed with their teacher in the classroom, and also rated on the Child Behavior Checklist (Achenbach & Edelbrock, 1983, 1986) by both their teacher and their mother.

The best single predictors (i.e., correlations) of how teachers saw children were: (a) the tendency of the teacher to rate the child negatively in their relationship as well, (b) contemporaneous maternal ratings of child problems, (c) observed child engagement in the classroom, and (d) how much teachers used a cognitively challenging interactive style in the classroom. Only one of these—other negative ratings of the child by the teacher—provided unique prediction when the full set of predictors was used (in regressions). Whether the prediction was to teacher ratings of behavior problems, or differences between how teachers and mothers rated a child on behavior problems, similar findings emerged.

Teachers rated children higher on problems when they rated their own relationship with the child more negatively and, generally, when mothers reported more child problems. Smaller classes, less observed child classroom engagement, and lower child verbal I.Q. were less powerful as predictors, but often predicted higher teacher ratings of problems when other teacher ratings of the child were not included. Teachers with smaller classes, teachers with more support staff, and those who were less cognitively challenging were more negative in their ratings of child behavior problems. It seems likely that these teachers had more special needs children in their classroom.

Contrary to expectations, neither discrepancies between teacher and mother in beliefs about what helped children learn, nor positive parental involvement in education predicted child problem behavior in the classroom or differences between teachers and mothers in their ratings. Child race, gender, and family welfare status did not generally predict behavior problems.

Clearly, child behavior seems to be the primary basis for teachers' ratings of a child. On the other hand, results suggest that teacher experiences with a child—and hence, his or her perceptions of the child—may be based not only on the child's behavior, but also on challenges confronting the teacher in the classroom. Based on the findings reported here, the presence of more special needs students in a classroom seems a likely indicator not only of differences in how engaged the children are in general, what percentage of time the teacher spends on teaching, and how cognitively challenging a teaching style he or she adopts, but also of how that teacher views the children in that classroom. In this era of inclusion, it seems particularly important to ensure that teachers working in low-income communities have the training, skills, and motivation to work with children whose educational socialization is limited, academic skills are underdeveloped, and problem behaviors are likely to disrupt their own and their peers' learning.

Recruiting and supporting skilled teachers to work in classrooms of manageable size in city schools may be both a direct and an indirect route—in terms of how they perceive their students—to helping all children to educational success.

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Teachers' Beliefs Regarding the Process of Development and Their Influence on Child Competence

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PRESENTER: Bronwyn S. Fees

Research indicates a strong relationship between what educators believe about young children's development and their practices (Bryant, Clifford, & Peisner, 1991; Kohlberg & Mayer, 1972; Rosenthal, 1991; Stipek & Byler, 1997). Children in nonparental care routinely transition from the parenting styles used by their parents to an environment created by the early childhood educator. Researchers in child development suggest these agents, in addition to the genetic makeup of the child (Scarr & McCartney, 1983), siblings at home (Dunn, 1983), peers (Hartup, 1992), and the child's own internal motivation to construct knowledge (Piaget, 1970) interact in development. The focus of this study was to examine the relationship between early childhood educators' beliefs about the process of development in young children and the extent of influence on cognitive and social-emotional competence by each of these developmental agents.

The following parent-identified competencies were examined: (a) getting along with others, (b) basic skills, (c) emotional control, (d) helpfulness and consideration, (e) curiosity, (f) reasoning, and (g) problem solving.

Participants (n = 30) were female educators of mean age 34 years, employed full-time in center-based child care programs in a midwestern state working with children 3 to 5 years of age. Beliefs about the developmental process were assessed using the Beliefs About Development Scale (BAD; Martin & Johnson, 1992). Beliefs regarding the degree of influence by each developmental agent on each competency were assessed using the Influence on Preschool Competency Scale (IPCS; Fees, 1998).

While educators were divided between cognitive-developmental and learning-developmental process perspectives, neither age, parental status, years of experience in child care, nor educational level differentiated these groups. ANOVA analyses showed no significant difference between groups on the influence of any agent. A two (child gender) by six (agent) repeated measures MANCOVA (repeated factor = agent) indicated that educators rated the child's own effort and their mothers as more influential than peers and genetics across all competencies. Educators rated their interactions as more influential than peers. A two (child gender) by six (competency) rm MANCOVA (repeated factor = competency) on each agent revealed that educators rated their interactions as more influential on academic "basic skills" competence than on emotional competence and genetics as more influential on academics than on social interaction (getting along with others).

Results indicated that developmental process perspective did not differentiate degree of influence by agents. A lack of significant difference between educators' own influence and that of the parents, or between the influence of fathers and mothers, suggested that these educators did not view their influence as greater than either father or mother and may indicate a "team" approach as encouraged by developmentally appropriate practices. Although surrounded by other children more than 30 hours per week, educators indicated peers were least influential. Finally, educators believed that they possess greater influence on academic skills as compared to emotional control, which may suggest retention of a more traditional teaching perspective focused on basic skills. Because early childhood focuses on the development of the whole child, these findings, consistent with Rosenthal (1991), may indicate these educators need greater support (e.g., training, in-class assistance) to assist children's emotional development.

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Predicting Individual Differences in Early Teacher-Child Relationships

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Because teacher-child relationships are associated with children's academic, social, and emotional development, these behaviors are associated, in turn, with more positive adjustment and overall competence in school (Birch & Ladd, 1997; Pianta, Nimetz, & Bennett, 1997; Sroufe, 1983). Although previous research has investigated various factors that may influence the important teacher-child relationship, additional research is needed to identify more of the variables involved (Pianta, 1997).

The purpose of this investigation was to identify variables relating to both teacher and child that predict differences in the quality of teacher-child relationships. The sample for this study consisted of approximately 75 1st- and 2nd-graders from urban, low-income families. Mother-toddler attachment security was assessed at 12, 18, and 24 months. Current mother-child relationship quality was assessed using both a maternal speech sample about the child, and the child's report of his or her relationship with mother. Children's behaviors were also rated by the mother, using the Child Behavior Checklist (Achenbach & Edelbrock, 1983, 1986). Alternative caregivers (who were identified by mothers) rated their current relationship with the child. Both the alternative caregiver and the teacher rated children's sociability. Separately, the child's teacher was observed in the classroom by an independent rater, trained to reliability. Child socioeconomic background and teacher-child racial and gender match were also taken into account. Finally, teachers rated the perceived quality of their relationship with the target child.

Individual variables that best predicted problems in the teacher-child relationship included: (a) mother's report of child's behavior problems, (b) the teacher's observed classroom behavior, and most strongly, (c) current childhood relationship information. The more cognitively challenging the teacher was in their classroom overall, the less likely they rated the relationship with the child as problematic. The more positive the current mother-child relationship, the more positive the teacher-child relationship. The more the child was emotionally dependent and the alternative caregiver felt needed by the child, the less likely the teacher was to rate their relationship as problematic. These variables seem to be working the same way to predict problematic teacher-child relationships, because only the alternative caregiver rating of their relationship with the child provided unique prediction of problematic teacher-child relationships during a full regression.

The best individual predictors of a positive teacher-child relationship were the child's sociability, the teacher's classroom behavior, and the alternative caregiver rating of their relationship with the child. Again, the more likely the alternative caregiver was to say that the child needed them, the less likely the teacher was to rate their relationship as negative. These variables were all interrelated, and the only variable providing unique prediction during the regression was the alternative-caregiver relationship ratings.

The relationship information indicated is interesting because toddler attachment ratings could only tell us about current problematic or positive relationships in so much as it told about problem behaviors. The current mother-child relationship did tell us about current problematic teacher-child relationships. More importantly, the current alternative caregiver rating of their relationship with the child told us more about both positive and problematic teacher-child relationships. Results also suggested that the overall qualities of the teachers' observed classroom behaviors were also very important in predicting both positive and negative teacher-child relationships.

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Examining Attachment Relationships and Teacher Behavior of African American and Latina Teachers

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PRESENTER: Jolena O. James

Contemporary African American childrearing is influenced by long a tradition of other mothers (Hill Collins, 1991). An examination of attachment relationships between African American and Latina early childhood teachers and children was presented. Results suggest that African American children matched with African American teachers had significantly different attachment relationships and teacher behavior than any other group.

(Abstract from program; poster summary not available for publication.)

Exploring Preliteracy Continuities and Discontinuities in Early Head Start Centers and the Households of Mexican Immigrant 2-Year-Old Early Head Start Participants

Maria de la Piedra, Harriett D. Romo

PRESENTER: Harriett D. Romo

Researchers have demonstrated that when children have cultural capital in their homes similar to the cultural capital recognized and valued in the schools, they have greater academic success. Many early childhood programs do not have staff prepared to deal with the linguistic and cultural diversity that 1st- and 2nd-generation children bring to learning centers. Although Head Start is sensitive to these problems and tries to hire teachers from the local community, social class differences and family differences may result in linguistic and cultural discontinuities in center-based care. A number of studies have found that cultural differences can have profound implications for the ways teachers interact with children (Valdés, 1996; Garcia & McLaughlin, 1995; Street, 1995; LeVine, 1993; Lareau, 1989; Schieffelin & Ochs, 1986; Philips, 1983; Fillmore, 1982). This research presents examples of discontinuities in discourse used in literacy interactions in the home and classroom of a 2-year-old Mexican immigrant Early Head Start participant. The literacy events were selected from videotapes of four focus children in their learning centers and in their homes over a period of 1 year. Literacy events included reading of books or print material, play activities involving print, oral story telling, writing, letter recognition, and games/play or daily routines involving literacy skills. In addition, the researchers collected extensive ethnographic data about the families and the community. The videos were shared with staff and parents to discuss the findings and assure that their insights were included in the analyses. Segments of the videos were transcribed for further analysis. The investigation identified "funds of knowledge" in the form of social interactions in the children's homes that promote literacy. The concept of funds of knowledge is drawn from the work of Velez-Ibañez and Greenberg (1992) and Moll, Tapia, and Whitmore (1993) and refers to bodies of knowledge essential to the household functioning. The analyses of literacy events focused on how family members obtained and distributed intellectual resources. Our findings showed that classroom teachers missed teaching opportunities because they did not recognize the learning initiatives of the child. For example, the teacher did not recognize words the 2-year-old produced or objects in the home that could have been incorporated in oral reading to promote meaning of the text. Literacy events in the home were social events with siblings and adults participating. Home language use was contextualized with concepts known to the 2-year-old child, such as family names, familiar objects, gestures, and play-acting. Literacy events in the classroom were individual teacher-student interactions that provided little contextual information familiar to the child and were dominated by a series of naming of unrelated objects.

The findings have implications for staff development. Based on the ethnographic understandings of households and classrooms, staff can incorporate knowledge or practices found in the local homes into the classrooms, center activities, and program routines to promote more meaningful literacy events.

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Latino Mothers' Cultural Models of Childrearing in the Context of a Head Start Program

Nurit Sheinberg

PRESENTER: Nurit Sheinberg

Head Start programs across the country are faced with the task of serving an increasing number of immigrant families. However, we have little information about the socialization processes of minority families in the United States. Most of the available socialization models are based on White American concepts that do not reflect in an accurate way the processes present in those families (Garcia-Coll, 1990). This creates a serious problem when we consider the diversity observed in the United States, particularly in the case of Latinos, which are the fastest growing minority group in this country. New socialization models are needed that include a complete range of normative beliefs and experiences of Latino families (Bornstein, 1991; Garcia-Coll, Meyer, & Brillon, 1995). This will help Head Start programs serve Latino families in an effective and respectful way.

This poster presented the results of a qualitative study of a group of immigrant Latino mothers whose children attended a Head Start program in a working-class northeastern city. The paper addressed the cultural models of childrearing that these mothers possess. The mothers presented four childrearing models that seemed to be influencing their parenting style and perceptions of Head Start:

- Mothers as teachers, supporting their children's academic success.
  This group of mothers perceived themselves as active agents in their children's development and socialization process. They shared an interest in having their children excel academically and considered themselves responsible for supporting their children's schoolwork. The most important aspect of their role as teachers was expressed in relation to the maintenance of Latino culture.
- Mothers as guides, creating "niños educados."
  This model emphasized their role as guides in shaping the characteristics they want their children to possess. These characteristics can be clustered into three groups: (a) proper demeanor (Harwood, 1992), (b) being decent and having personal dignity, and (c) an emphasis on interpersonal relationships. They espoused the notion of *"educación"* as presented by Reese, Balzano, Gallimore, and Goldenberg (1995). They wanted their children to succeed academically while being respectful and behaving properly.
- Mothers as protectors and authority figures.
  These mothers accentuated the importance of control and authority in their role as mothers. They voiced the ability to instill obedience and respect in their children as a central aspect of good Latino parenting. However, they perceived their ability to be able to have control over their children to be diminished by threats present in the environments in which they lived and undermined by social institutions and values in the United States.
- Mother as cultural mediator, developing bicultural children.
  This group of mothers had to constantly deal with two distinct and at times conflicting cultures. They had to make decisions about which aspects of their cultural models were salient enough to be transmitted to their children, even if they ran counter to mainstream society, and which aspects needed to be modified to function in the United States. The different values emphasized at home and at school could create conflicts between children and parents, and between the family and the school.

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Immigrant Parents of Preschoolers and Teachers Explore Cultural Issues in Education: Contrasting Parents and Teachers Assumptions and Concerns

Elizabeth DeMulder, Leo Rigsby, Angela Willson-Quayle, Selma Caal

PRESENTERS: Elizabeth DeMulder, Leo Rigsby, Angela Willson-Quayle

Throughout children's development, parents and teachers provide important support to help them connect new experiences to established knowledge as an aid in their learning (Vygotsky, 1978). This support requires that parents and teachers have knowledge of and can respond to the child's individual experience and needs. There is an increasing recognition that the teacher's awareness of and respect for the child's home culture and "lived curriculum" (Yancey, 1998) helps children to make these important connections. When expectations, values, and experiences of the home culture conflict with school culture, children may have great difficulty in resolving conflicting expectations. Unresolved conflicting expectations can lead to frustration, disengagement, and rebellion.

While greater understanding of children's individual needs and experiences can be facilitated through communication, attempts to create dialogue around cultural issues do not appear to be common, neither within schools nor in the wider society. McCollum (1996) suggests that parents who are immigrants and teachers of immigrant children find it difficult to overcome communication barriers. The efforts of each group are limited by lack of mutual understanding. In order to increase understanding of different perspectives with the goal of supporting immigrant children's learning in schools, the voices of immigrant parents as well as teachers need to be heard.

This poster reported on the perspectives of immigrant parents and teachers who participated in a series of discussions about education. Immigrant parents, whose children attended a subsidized preschool program targeted for low-income families, participated in focus group sessions and individual interviews over a period of about 18 months. Preschool parents came from various Spanish-speaking cultural backgrounds, educational experiences, and stressful life conditions. Because parents were more comfortable speaking in their native language, a bilingual research assistant conducted the focus groups in Spanish. The conversations were audiotaped, translated, and transcribed by the bilingual research assistant. Prekindergarten-12th-grade teachers participated in an on-line web discussion over a period of several months as part of a course concerned with language and culture. In addition, preschool teachers participated in semistructured interviews focusing on the challenges immigrant children and their families face.

A prevalent theme in discussions with parents and with teachers was discipline at home and at school. Parents and teachers tended to have different perspectives concerning parent and teacher responsibilities and appropriate disciplinary styles. Parents in the focus groups suggested that teachers and administrators fail to use proper authority and control to discipline their children in school. Several teachers, on the other hand, expressed the opinion that disciplinary

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problems at school are due to parents' lack of authority and control over their children's behavior at home. Interestingly, several parents suggested that schools and the larger society deny parents the authority to control their children at home. That is, many of the parents in the focus groups felt that their ability to effectively discipline their children—through corporal punishment—is compromised because of the prevailing negative view in the United States of this form of discipline (a view that parents believe is reinforced in the school setting).

Focus group sessions, interviews, and on-line discussions uncovered different perspectives on a variety of issues that have important implications for children's education in our multicultural society. Communication about differing expectations and beliefs is a first step toward helping parents and teachers work together to support children's development and learning across home and school.

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Southeast Asian Parents' Concerns about High/Scope and Developmentally Appropriate Practice in Head Start Classrooms: Lessons From an Ethnographic Study

Eden T. Inoway-Ronnie

PRESENTER: Eden T. Inoway-Ronnie

This paper explored Southeast Asian refugee Head Start parents' concerns about the use of High/Scope and Developmentally Appropriate Practice (DAP) approaches as implemented in two racially and ethnically diverse Head Start classrooms.

The findings reported are part of a broader 2-year study of White teachers' work in ethnically and racially diverse Head Start classrooms (Inoway-Ronnie, 1996). Research involved two walk-in programs with Hmong, Cambodian, Laotian, Vietnamese, African American, Latino, and White children. The majority of children in the primary site were Hmong. Nearly all of the Southeast Asian families were recent immigrants. Many parents spoke limited English and had little formal education. Both classrooms had White female teachers. From 1993 to 1995, qualitative data were gathered through extensive observations, interviews, and analysis of documents.

Many of the Southeast Asian parents expressed concerns about the instructional practices in the classrooms. From their perspective, children were given far too much undirected "free time." These parents expressed their desire for more direct instruction. They wanted teachers to explicitly teach children skills such as how to write their names, count, and recognize colors and shapes. They placed a great deal of emphasis on the importance of their children learning to speak and understand English before entering kindergarten in order to avoid placement in English as a Second Language (ESL) programs. The teachers, aware of parents' concerns, yet also cognizant of the research and local program support for the approved curriculum, explained to parents their belief that all the children would develop the desired skills and abilities.

Research by educational anthropologists reveals the importance of recognizing the tacit and often unconscious nature of certain cultural differences (e.g., Philips, 1983). With this in mind, this study explored three factors that influence the concerns expressed by Southeast Asian parents. One factor may be that the classroom practices conflicted with some of the parents' deeply held cultural beliefs. Child-centered education, more common in Western societies, may conflict with certain non-Western cultural beliefs (see Spodek, 1999; Timm & Chiang, 1997; Tobin et al., 1989). A second factor may be that many parents were concerned that approaches used in the classroom, while successful in certain settings, failed in their children's classrooms to provide the extensive practice they believed necessary to master the English language. Many parents sought more direct instruction in English in the classrooms in part because they were unable to provide this assistance on their own. Finally, a third factor may be that parents wanted Head Start to give their children a familiarity with the forms and patterns of schooling they believed their children needed in order to succeed in public elementary school and beyond (Delpit, 1988).

It is important to note that Southeast Asian parents are not alone in raising concerns about the types of classroom practices and structure of activities found in these Head Start classrooms (e.g., Lubeck, 1985). Findings suggest the need to address the tension between the goal of affirming cultural differences and enhancing academic success by socializing to mainstream norms of behavior.

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Children's Roles in Home-School Relationships

Heather Weiss, Kimberly A. Kopko, Peggy Vaughan, Ellen Mayer, Holly Kreider

PRESENTER: Kimberly A. Kopko

Family involvement in school and in children's learning can lead to academically successful outcomes for children (Henderson & Berla, 1994). Research on family involvement and the relationship between home and school primarily focuses on adult roles. Children are not typically viewed as active or involved facilitators, either individually or collectively, of these relationships (Edwards & David, 1997). This is particularly true for children in early elementary grades. Although lacking in empirical evidence, school practices that grant children an active role in the home-school relationship demonstrate encouraging outcomes. For example, through child-led parent/school conferences and portfolio evaluations, children as early as 1st and 2nd grade are able to competently display their work as well as accurately pinpoint their academic strengths and weaknesses (Jacobson, 1999; Taylor, 1999). Despite emerging evidence that children, in their roles as students, can be critical influences in home-school relationships, the role of the child has not been fully explored in family involvement research (Epstein, 1996).

Taking a child-centered approach to home-school relationships that is grounded in developmental readiness and appropriate expectations, this poster offered initial empirical findings from an exploratory case analysis of three 2nd-grade children in the School Transition Study, part of the MacArthur Foundation's Network on Successful Pathways Through Middle Childhood project, and the roles that they play in connections between home and school, with particular attention given to the contexts that shape these roles and the impact of children's roles on the nature of the home-school relationship.

Findings from this exploratory analysis illuminated how children's roles in the home-school relationship vary. Active roles included children reporting information between home and school and expressing a preference for certain home-school actors or activities. Children also acted as indirect shapers of home-school connections through subtle and complex ways including the presentation of behavior problems that demand school contact with home.

Also highlighted were the important dimensions influencing children's roles. Child characteristics, such as the child's agency and initiative, were one important dimension. Further dimensions include the child's sense of self, the child's tendency for self-disclosure, and the child's intrinsic motivation.

Further, findings indicated that children's roles in the home-school relationship are contextual. Beliefs and practices of other key players, namely family members and teachers, were important contextual factors. For example, differing parenting strategies shaped children's roles. Finally, differences in parent-child and existing parent-teacher relationships provided an important context for children's roles. Consequently, the child's role and involvement impacted the family-school relationship in a unique way. This point is illustrated by the following example: one child assumed an active role, resulting in a positive and synchronous family-school relationship, whereas the second child's involvement, although active, was insufficient to overcome the disconnection between the home and school contexts. The third child was active in an indirect manner, expressing his needs in subtle and complex ways in both the home and school contexts.

Understanding the different types of roles children play is useful for informing parent and teacher practices, and this exploratory analysis demonstrated that both internal and external factors require attention in order to properly situate the child in the home-school relationship.

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Home Visiting

Home Visiting: Documenting Efforts Directed Toward Program Goals

Carla A. Peterson, Susan L. McBride, Kathie Readout

PRESENTERS: Carla A. Peterson, Susan L. McBride, Kathie Readout

Research and program team members collaborated on efforts to describe the process and content of intervention strategies implemented during home visits. A discussion of the rationale for research goals, a description of development of data collection tools, and a report of descriptive findings regarding the mid-Iowa Community Action Early Head Start intervention were presented.

(Abstract from program; poster summary not available for publication.)

Conducting a Randomized Study of Nurse and Paraprofessional Home Visitation With Community Partners

Isabel Stabile, Mimi Graham

PRESENTERS: Isabel Stabile, Mimi Graham

This randomized, controlled study of at-risk pregnant women was conducted in six predominantly rural North Florida counties, with a persistently high rate of infant mortality. We hypothesized that pregnant women at high-risk of perinatal complications who received weekly home visits by systematically trained home visitors (the treatment group) would have different birth outcomes than those who only received less intensive home visits available in their communities (the control group).

In addition to prenatal care, women in the treatment group ($n = 315$) received weekly home visits by either paraprofessional or nurse home visitors. The home visitors working with the treatment group promoted healthy lifestyles, coordinated services, and provided education and support to ensure successful pregnancies and healthy babies. In contrast, women in the control group ($n = 169$) received nurse case management services already available in their community. Although originally we hypothesized that the intensive prenatal home visitation intervention would result in improved birth outcomes, this was not the case. A possible explanation for the lack of treatment effect in our study may be attributed to a "lateral effect." In other words, we were unable to document actual caseloads for the nurses who served women in the control group, and it is possible that the infusion of additional home visitors improved the ability of the Florida Healthy Start care coordinators to provide more intensive services to the control group. In order to obtain more meaningful data, women from the study were segregated into two new categories. The new categories were based on those women who received prenatal home visits (served), regardless of the agency providing the service and those who received no prenatal home visits of any kind (not served). Analysis of served versus not served women shows that prenatal home visitation/case management services improved birth outcomes among those who actually received home visiting services.

The findings from this study must be viewed with caution for several reasons. First, the sample group is relatively small, which limits our ability to look at statistically significant group differences. Secondly, the sample group included women who were at much greater risk of poor pregnancy outcome than a comparison group of the general pregnant population in Florida during the same time period. Thirdly, before the provision of services, the treatment group differed from the control group women with respect to certain risk factors, such as race, use of tobacco, and history of previous preterm delivery. We attempted to adjust statistically for these preintervention differences, but it is possible that there are other associated conditions that biased the sample in unknown ways. Moreover, because the proportion of women with poor birth outcome was less than 10% of the total sample, the ability of statistical tests to examine group differences was limited.

In conclusion, intensive prenatal home visitation in the treatment group did not appear to significantly improve birth outcomes compared to women receiving the regular services in the control group. However, women who received home visitation services (served group) whether in the treatment or in the control groups experienced significantly better birth outcomes than those who received no services at all (not served group). Our findings suggest that, given limited resources, targeting home visiting services to high-risk women would improve birth outcomes.

Mothers' Relationship Attitudes and Home Visits

Lori Roggman, Diana Coyl, Lisa Newland

PRESENTERS: Lori Roggman, Diana Coyl, Lisa Newland

Home visits by trained Early Head Start staff are intended to increase parents' abilities to provide supportive environments for their children (Powell, 1993). Parents' attitudes about close relationships may influence relationship quality with staff members and parents' responsiveness to suggestions offered during home visits (Korfmacher, Adam, Ogawa, & Egeland, 1997). If parents are distrustful or resistant, they may perceive home visits as less helpful. In turn, home visitors may view such parents as uncooperative, unwilling, or unable to improve their parenting skills.

Mothers' perceptions of home visits and staff's perception of mothers' current parenting abilities and improvement were explored in relation to mothers' relationship attitudes. When mothers entered the program they were interviewed by staff members, and they completed a measure of attitudes about close relationships. The Relationship Attitudes measure (RA; Simpson, Rholes, & Nelligan, 1992) provides scores related to ambivalent and avoidant attachment styles. Six months after program enrollment, mothers were also asked about their perceptions of home visits and their relationship with their home visitors. After 2 years of program services, home visitors were interviewed and asked about their relationships with parents.

Correlational analyses were used to examine: (a) mothers' relationship attitudes and mothers' perceptions of home visits and home visitors, and (b) mothers' relationship attitudes in relation to home visitors ratings 2 years after enrollment. Mothers' relationship ambivalence was related to positive ratings of the home visits (i.e., informative, interesting, involve us together, help me make decisions, help make the baby happy) and of the home visitor (i.e., home visitor provides good information). Mothers' relationship avoidance was related to positive ratings of the home visit as being interesting, helpful in problem solving, and involving them together, but not of the home visitor. These findings suggest that avoidant and ambivalent mothers perceive different benefits of the home visiting program. Ambivalent mothers may value both their personal relationship with the home visitor and the services provided in the home visit, whereas avoidant mothers may consider the services provided in the home visit as more important than the relationship.

Mothers' relationship attitudes were negatively related to home visitor ratings. As mothers' avoidance increased, home visitor ratings of quality of home visits, current parent knowledge and skills, current and improved parent responsiveness to infants and overall relationship quality, and current and improved goal setting all decreased. As mothers' ambivalence increased, home visitor ratings of current parenting skills, knowledge of infant development, parent responsiveness to infant, goal setting, and mothers' use of available resources all decreased. These findings suggest that mothers' avoidant and ambivalent relationship attitudes may present barriers to accomplishing program goals.

Curiously, mothers' avoidant and ambivalent relationship attitudes and their ratings of home visitor and home visits were all positively related. However, home visitors ratings and mothers avoidant and ambivalent relationship attitudes were all negatively related. Specifically, home visitors reported that these mothers were not currently meeting program goals or improving in their parenting abilities, and that the quality of the home visits was inferior.

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Mother and Home Visitor Personality Characteristics, the Mother-Home Visitor Relationship, and Home Visit Intensity

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PRESENTERS: Jean M. Ispa, Kathy R. Thornburg, Sheila B. Brookes

Practitioners working in home visiting early intervention programs have long been challenged by agency guidelines regarding home visit frequency. Previous research suggests that regular, intensive home visits predict increased benefits for children and families in poverty (Gomby, Culross, & Berhman, 1999; Powell, 1993.) Yet, a recent report indicates that, across the country, families receive only about one half the number of intended visits (Daro & Harding, 1999; Gomby et al.). Research exploring the reasons why, within the same program, some parents receive more home visits than others may help practitioners address this issue.

How well a mother gets along on a personal level with her home visitor may influence the intensity of the services she receives. Accordingly, we used quantitative and qualitative methods to investigate how personality and other factors may affect the mother-home visitor relationship, and, in turn, home visit intensity.

The research participants were 5 Midwestern Early Head Start (EHS) home visitors, and 41 young Black mothers to whom they were assigned. Federal requirements stipulated that each family receives at least three EHS home visits per month. Due to unclear expectations and personnel issues, on average this requirement was not met during the first 2 program years. (Later structural changes led to a reduction in the home visiting requirement. The current study pertains to the first period with the higher requirement.) All participants completed Tellegen's (1982) Multidimensional Personality Questionnaire, form NZ (MPQ) and nine of the mothers and all the home visitors were interviewed.

Home visit intensity was operationally defined as the mean number of minutes per month the home visitor spent with mothers, as determined from home visitor records. Analyses using multilevel modeling indicate that maternal personality-based achievement striving and desire for control were negatively related to home visit intensity; maternal stress reaction and alienation predicted greater intensity. Thus more "needy" mothers received more service than "nonneedy" mothers. Home visitors' higher levels of well-being and lower levels of stress reaction also predicted increased home visit intensity. No interaction effects were found.

A number of related themes emerged from qualitative analysis of the interviews. A sampling of those themes is as follows: (a) mothers who were assertive received more help because they initiated telephone contact with the home visitors when they hadn't heard from them in a while, (b) home visitors worked especially hard for mothers perceived as needy, while neglecting the needs of mothers who did not present crises, but who would have benefited from help reaching higher goals, (c) what mothers knew about home visitors' personal lives seemed to affect mothers' confidence in the information imparted by the home visitors.

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Infants and Toddlers

Mother-Infant Interaction Among Japanese-U.S. and South American-U.S. Families

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Parenting behaviors such as nurturing, physical stimulation, social engagement, verbal interaction, didactic activity, and provision of material goods are considered culturally universal (Bornstein, 1995). However, culture influences how mothers operationalize these caregiving behaviors and which are emphasized. Although infants world-wide engage in physical activity, interact socially, explore their environment, vocalize positively, and express distress, infants' behaviors are shaped by the parenting practices of their cultural group (Bornstein, 1995). Previous research has documented differences in Japanese and South American mothers' and infants' behaviors and relations between them (Bornstein et al., 2000; Caudill & Schooler, 1973), but little is known about mother-infant interaction among immigrant groups. We chose Japanese-U.S. and South American-U.S. participants because these two groups are both fast growing and comparable in terms of income and collectivist cultural values (Parke & Buriel, 1998). Cultural values that reflect beliefs about interpersonal relationships contribute to differences in mother-infant interaction (Caudill & Schooler, 1973).

We observed 37 Japanese-U.S. and 40 South American-U.S. mothers' and their 52-month-old infants' naturalistic behaviors. Consistent with previous research (Caudill & Schooler, 1973), Japanese-U.S. mothers in our sample engaged in less social behavior than South American-U.S. mothers. Japanese-U.S. mothers spoke to their infants less than South American-U.S. mothers, reflecting Japanese cultural devaluation of verbal communication (Clancy, 1986). Japanese-U.S. mothers provided less auditory stimulation for their infants than South American-U.S. mothers, reflecting cultural differences in the value placed on silence (Lebra, 1976) and music (Winn, 1992). Like their mothers, Japanese-U.S. infants exhibited less social behavior than South American-U.S. infants, suggesting that early in life mothers refine their infants' behaviors to match those of their interactional partner (Schooler, 1996). As expected, positive relations between maternal and infant social behavior, maternal didactic behavior and infant exploration, and maternal provision of materials and infant exploration were found for both groups, reinforcing the idea that maternal and infant behaviors are reciprocal (Emde, 1992). Unexpectedly, a negative relation between South American-U.S. mothers' and infants' physical activity was found.

Our findings have implications for professionals who work with these acculturating families. For example, the finding that South American mothers encourage their infants' physical development more when their infants' motor skills are poor suggests that these mothers may believe that there are some developmental tasks that infants will master on their own and that parents need only intervene if infant development seems to fall behind. This belief stands in opposition to the European American belief that parental intervention is key to normal and accelerated infant development. This research supports the idea that immigrant groups retain aspects of their unique heritages regardless of their acculturation or income levels (e.g., Fisher, Jackson, & Villarruel, 1998), and suggests that low-income immigrant families should be compared to families from the same cultural background and not European American families. As this study illustrates, it is imperative that we learn more about childrearing behaviors among immigrant cultural groups and their implications for children's development because they differ from European American families and each other.

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Reading With Infants in Child Care

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PRESENTER: Meera Shin

Reading with infants and young children is a powerful way to enhance early language development. Through picture book sharing with infants, caregivers can boost pre-reading skills, attention span, word comprehension, and pleasure with books (Ninio, 1983; Wheeler, 1983). Intervention studies have tried to enhance early shared book reading between mothers and low-income preschoolers (Pellegrini, Perlmutter, Galda, & Brody, 1990; Whitehurst et al., 1988), but not with infants, for whom families increasingly need child care.

This study examined frequency and style of reading patterns in four different middle-class centers in a middle-sized urban area in the United States. We observed 24 teachers of awake infants 4- to 27-months-old (29 males and 26 females) in three centers daily during free play time for 1 hour for 1 week, and in one center daily for 2 hours over a 2-week period. Every 15 seconds of each reading episode, a modified event/time sampling procedure was used to code teacher/infant behaviors.

How old are infants who are read to? Of the 55 infants observed, 35 were read to and 20 were not read to, although they were awake and available for reading nearly 75% of the observation time. For infants 4- to 8-months-old, only 1 of 13 was read to (7.7%). Infants 9- to 12-months-old were available for reading 84.8% of observation time; 7 of 13 were read to (53.8%). Infants 13- to 17-months-old were available almost 75% of the time; 13 of 15 were read to (86.7%). All 14 infants 18- to 27-months-old were read to. Teachers tended to read much less with infants under 1 year of age than with toddlers.

Is most reading done individually or in groups? Teachers mostly read to a single child for 74.1% of the 15-second reading segments recorded. Per 15-second reading segment, teachers read to: two infants (10.4%), three infants (8.1%), four infants (5.7%), five infants (1.0%), and nine infants (0.8%). Of 174 reading episodes coded, the number of infants in a reading episode rarely changed (6.3% during 11 of the episodes).

How long do caregivers read to infants? The mean reading episode (coded in 15-second segments) lasted about 1 minute ($M = 4.5$ segments, $SD = 4.3$); ¼ of episodes lasted 1¼ to 2 minutes; 64.1% of episodes lasted from 15 seconds to 1 minute. Reading to infants was a very brief activity.

Do caregivers read longer to older infants? In 137 out of 174 reading episodes (77%), infants were read to singly. For these infants, the length of reading episodes did not differ significantly by child age ($t133 = -.9$, $p > .05$). For infants 4- to 12-months-old, 66.3% of 28 reading episodes lasted about 1 minute. Only one episode lasted more than 2 minutes. For older infants 13- to 27-months-old, of 109 episodes, 61% lasted 1–4 segments; 21.9% lasted 5–8 segments (1 to 2 minutes). Only 17.1% lasted more than 2 minutes. Adults read more text and used more pointing and eye contact with toddlers than with younger infants with whom they tended to "label and describe" more. Teachers rarely used verbal elaboration.

Does caregiver reading differ by infant gender? Teachers used some techniques more with boys and others more with girls: They used more pointing and eye contact with girls and more verbal controls to gain infant boys' attention.

Reading to very young infants was rare in group care and even reading with infants older than 1 year lasted very briefly (1 minute per episode). The "How to" part of reading to very young infants is a challenge for caregivers. Moving from picture book sharing to reading text occurs gradually. Infants can be kept absorbed and enchanted by simple stories if teachers "dance the developmental ladder" (Honig, 1982; Honig & Brophy, 1996): modulate voice tones to attract infant to a book; insert more descriptions and embroider sparse text to hold infant interest; encourage participation so that infants imitate animal sounds and point to pictures when requested; connect book pictures with daily experiences in eating, bathing, and playing; and use cadenced rhyming text with interesting pictures that engage toddlers, for example, "Something from nothing" (Gilman, 1992), a richly illustrated story with a glimpse of the parallel world of a busy mouse family at the bottom of each page.

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Mentor Program Evaluation for Adolescent Mothers and Their Infants

Kathleen Tebb

PRESENTER: Kathleen Tebb

This evaluation of an early intervention/mentoring program for adolescent mothers and their infants found that those in the experimental group attended more parenting classes and had higher scores of home care using the HOME Inventory (Bradley & Caldwell, 1968) than mothers in the comparison group. Infants in the experimental group had higher percentages of immunizations and fewer delays in the personal-social domain than those in the comparison group. Recommendations for improving the service delivery system and future research are made.

Despite the increased risks for children born to adolescent mothers, negative developmental outcomes are not inevitable. Adolescent mothers who formed supportive relationships with at least one adult have been found to fare well despite the odds against them (Brooks-Gunn & Furstenberg, 1986; Rhodes, Ebert, & Fischer, 1992; Werner & Smith, 1992). Because these findings have been limited to naturally occurring relationships, this study investigates whether program facilitated relationships can have similar positive outcomes.

This study evaluated the effectiveness of a mentoring program (Sister Friend in Yolo County, California) on its ability to ameliorate risk factors commonly found among low-income adolescent mothers and their infants. Using a quasi-experimental design, this study compared low-income adolescent mothers (ages 14 to 19) participating in both the Sister Friend and Cal-learn program ($n = 17$) with a similar group of mothers receiving Cal-learn-only services ($n = 20$) over 6 months (with no attrition). All infants were born free of complications (ages 2- to 18-months). There were no significant differences between the two groups on demographic and pretest measures.

Adolescent mothers and their infants participating in the Sister Friend Program had significantly better outcomes than those in the Cal-learn-only group. Compared to Cal-learn-only participants, adolescent mothers in the Sister Friend Program attended more parenting classes and showed greater improvements on the HOME (Bradley & Caldwell, 1968). Their infants had higher percentages of complete and on-time immunizations and fewer personal-social delays on the Denver II (Frankenburg et al., 1992) than those in the comparison group.

Interviews with adolescent mothers and their mentors were conducted to evaluate the program's implementation. In successful matches, adolescent mothers reported that their mentors were skilled listeners who were kind and offered consistent support and concrete help. Mentors reported that adolescent mothers kept appointments and returned phone calls. Barriers to a successful match included: loose interpersonal boundaries, failure to follow through with promises, mentor expectations for rapid improvements, a clash in value systems, and being judgmental. Because only four mentor relationships lasted throughout the study period, it is recommended that the program improve mentor trainings through focusing on adolescent development, issues facing teen parents, and interpersonal boundaries. The initial match needs better facilitation and program staff needs to provide pro-active ongoing guidance and support to the match.

Despite a small sample size, participation in the Sister Friend Program was associated with improved outcomes. However, these findings need to be interpreted with some caution. Because adolescent mothers were not randomly assigned, there may be characteristics unique to Sister Friend participants that contributed to the different outcomes. Yet, adolescent mothers' experiences with the program, even if brief, may break the isolation so frequently experienced. Many mothers participated in parenting classes and other activities where they connected with other mothers and caring adults.

This evaluation revealed a strong and urgent need to coordinate, improve the functioning of, and monitor existing services. Child care cost, quality, and availability are major issues. None of the infants in this study were enrolled in Early Head Start even though comprehensive early intervention can ameliorate negative outcomes (Hale, Seitz, & Zigler, 1990). Immunization rates in both groups (66.94% vs. 41.95%) are below national goals. With Medicaid, the Children's Health Insurance Program, and community clinics, children should receive comprehensive preventative health services, but care is accessed in emergencies.

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The Impact of Poverty and Ecological Risks on Infant/Toddler Social-Emotional Problems and Delays in the Acquisition of Competencies

Stephanie M. Jones, Margaret Briggs-Gowan, Alice S. Carter

PRESENTER: Stephanie M. Jones

Employing individual, cumulative, and interactive risk models, the impact of poverty and multiple co-occurring ecological risks on infant and toddler social emotional problems and competencies is examined. Implications for the ability of Head Start to meet the many needs of poor young children and help them successfully transition to an early learning and social environment are discussed.

(Abstract from program; poster summary not available for publication.)

Development Of Self-Regulation: A Transactional Perspective

Elizabeth A. LeCuyer-Maus, Gail G. Houck

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Difficulties in self-regulation may compromise the social health of children, families, and communities. Knowledge of continuities and discontinuities in the development of self-regulation in a general population is expected to assist professionals to identify normative developmental patterns of self-regulation, as well as patterns at risk, to facilitate earlier intervention and prevention. In this study, relationships were examined between maternal and toddler behavior in limit-setting interactions at 12, 24, and 36 months, and with toddler self-regulation at 36 months. The transactional perspective suggests that environmental (socializing) factors as well as toddler characteristics (developmental maturation) influence the development of self-regulation.

One hundred twenty-six mothers with normal, healthy infants were recruited from a family medical clinic. Mothers as a group were slightly socially disadvantaged (34% were single mothers, 30% had incomes = $15,000/year). Mothers were predominantly White ($n = 99$; 79%); African American mothers were the second largest group (23; 18%). Maternal age ranged 17–47 years, ($m = 28.3$). Participants were videotaped in a limit-setting interaction at 12, 24, and 36 months in an observational playroom; mothers filled out written questionnaires. Videotapes were coded using the Prohibition Coding Scheme (Houck & LeCuyer, 1995). Maternal limit-setting classifications were: Indirect, Teaching-based, Power-based, and Inconsistent (Cohen's kappa = .75 - .87). Toddler response-to-limits classifications were: Autonomous-disengaged, Autonomous-compliant, Persistent-engaged, Persistent-disengaged (Cohen's kappa = .86 - .96). Toddler self-regulation at 36 months was assessed using maternal reported Self Concept Questionnaire (SCQ, mean Cronbach's alpha .84; Stipek, Gralinski, & Kopp, 1990) and the Adaptive Social Behavior Inventory (ASBI, Cronbach's alpha .71 - .79; Hogan, Scott, & Bauer, 1992).

Increasing numbers of toddlers were classified as having optimal responses to limits between 12 and 36 months (McNemar chi square 26.33, $p = .0001$). At 12 months the Persistent-engaged toddler classification was modal ($n = 61$; 48%), but by 36 months, most toddlers were Autonomous-compliant ($n = 63$; 50%), displaying optimal age-appropriate self-regulation. Mothers as a group also displayed increasingly optimal maternal limit-setting behavior (McNemar chi square 8.20, $p = .01$). At 12 months, most mothers were Power-based ($n = 50$; 40%), but by 36 months, most were Teaching-based ($n = 70$; 56%). Teaching-based patterns at 12, 24, and 36 months were associated with higher levels of toddler self-regulatory behavior at 36 months. Power-based and Inconsistent maternal patterns were consistently related to less optimal toddler responses to limits ($r = .18$ to $.38$; $p = .05$ -.001). Mothers who maintained an Indirect pattern past 12 months or an Inconsistent pattern past 24 months also had toddlers displaying lower levels of self-regulatory behavior (SCQ, ASBI) at 36 months ($r = -.19$ to $-.22$; $p = .05$).

While maturational and socialization processes may positively influence developing self-regulation in toddlers, some socialization patterns may provide a challenge for them. Most mothers and toddlers by 36 months displayed behaviors indicating progress toward optimal self-regulation, yet almost one half of dyads still displayed behaviors appearing less conducive to optimal self-regulation. Research past the age of 36 months, and on contributory factors, is warranted to assist the development of interventions toward optimal self-regulation and socially adaptive behavior.

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Maternal Reports of Meaningful Variation in the Daily Routines of Toddlers From an Ethnically Diverse Group of English- and Spanish-Speaking Early Head Start Research Families

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Research investigating low-income populations suggests a positive relation between adherence to family routines and child outcomes. Meaningful variation in the frequency and kind of routines reported by an ethnically diverse group of English- and Spanish-speaking Early Head Start research mothers when their toddlers were 30 months old is assessed.

(Abstract from program; poster summary not available for publication.)

Feeding Responses of Preterm Infants to ATVV Intervention

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The objective of this study was to determine whether the use of a multisensory intervention administered immediately prior to feeding modified preterm infants' behavioral state from sleep to alertness, increased prefeeding behaviors, and improved infants' oral feeding efficiency. This study took place in the intermediate care nurseries of three medical centers in the Midwest from 1996–1998.

A convenience sample of 22 stable preterm infants born at 29–33 weeks gestation was obtained. The eligible infants were studied when they began oral (bottle) feedings (approximately 33–35 weeks gestational age). Equivalency of the two groups at enrollment was determined using the Postnatal Complications Scale (Littman & Parmelee, 1974). Infants were randomly assigned to a control (Group C) or experimental group (Group E). Group C infants received routine care, which included transition from gavage to nipple feeding when the infant reached 1,500 grams (or 32 weeks); no additional stimulation was provided. Group E infants also received 15 minutes of ATVV (auditory, tactile, visual, and vestibular) intervention for three consecutive feedings when oral feeding was instituted. The ATVV intervention is administered based on the infant's positive and negative behavioral cues (Burns, Cunningham, & White-Traut, 1994; White-Traut & Tubeszewski, 1986; White-Traut, Nelson, Silvestri, Patel, & Kilgallon, 1993; White-Traut, Nelson, Burns, & Cunningham, 1994; White-Traut, et al., 1999). Investigators blind to group assignment obtained all dependent measures. All infants had dependent measures recorded at the same time intervals during each session. Data collection took place on weekdays, between 5a.m. and 3p.m. Three consecutive feedings were evaluated for each infant. The infant remained in the incubator or the open crib throughout the procedure. The intervention periods were initiated 20 minutes prior to a scheduled feeding. Infant Behavioral State (IBS) was assessed using the Thoman State scoring system (Thoman, 1985; 1987; 1990). Feeding readiness behaviors were videotaped during the baseline interval, during the intervention, and for 3 minutes following completion of the intervention. The infant was then bottle-fed. At the completion of the 10-minute post feeding time, the infant was returned to the crib or incubator. Feeding efficiency was evaluated as volume ingested and the length (time) of each oral feeding. The videotapes were reviewed using the Cagan Videotape Coding System for Orally Directed Behaviors (Cagan, 1993). Two researchers who were blind to the purpose of the study and the infant's group assignment were trained to reliability prior to initiation of the study.

Group E infants were more alert prior to feeding ($p = .000$) and had more feeding readiness behaviors. Feeding time increased by the third feeding by almost 4 minutes for Group C infants. In contrast, Group E infants showed reduced length of feeding over the three feedings by approximately 1 minute. For infants assigned to Group E, the frequency of behaviors increased with each consecutive feeding ($p = .000$). No significant differences in feeding intake were found between groups E and C.

These findings suggest that infants progressed in their ability to demonstrate feeding readiness behaviors with each subsequent intervention session and these changes, along with changes in behavioral state, may have impacted the experimental group's feeding efficiency. Indeed, a trend was noted for experimental group infants to show a reduced length of feeding despite a stable volume intake.

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Prenatal to Three Initiative: New Treatment Models for Infants of Depressed Parents

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The San Mateo County Prenatal to Three Initiative uses a multi-disciplinary team approach of Public Health Nurses, community workers, infant developmental specialist, nutritionists, and medical social workers in a home-based intervention. The High Risk Team works with families where there is a history of mental illness or active symptoms of a mental disorder. Their work includes a strength-based approach to parental teaching and innovative assessment and intervention tools that affect the ability of the infant to self-regulate and form attachments with their primary caregiver.

(Abstract from program; poster summary not available for publication.)

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Information Technology

The Impact of TV Commercials on Head Start Children's Food Preferences

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In an effort to understand the recent trends in childhood obesity and the transformations in media directed at young children, we examined the influence of television food advertising on young children who are in the process of developing food preferences (Birch & Risher, 1998). We hypothesized that children who watched a videotape with embedded commercials would prefer advertised items more than children who watched the same videotape without commercials.

Participants were 46 children attending a Head Start program in California. Eighty-five percent of the program's families had household incomes under $15,000. Protocols were approved by the Stanford University Panel on Human Subjects in Research. Written parental consent was required.

In a randomized, controlled trial children viewed either a treatment videotape with embedded commercials or a control one without commercials. Both videotapes consisted of a top-rated children's program, separated by an educational segment. After viewing either videotape, each child was individually tested. Researchers instructed the child "to look at the pictures and then tell me or point to the picture of the thing that you would want more." One picture board featured the advertised item in its packaging; the matched picture board presented an item similar to the advertised item in both product type and packaging.

Forty-six children participated: Fifty-two percent were boys and the average age was 4 years (SD = 0.82, range 2-6). Of the parents, 8 were White, 17 were Latino Americans, 2 were Asian Americans, 2 were Native Americans, 1 was African American, and 9 were Other. In 4 households, neither parent had completed high school; 19 households had at least one parent with a high school degree, 9 households had at least one parent with some college education, and 7 households had at least one parent with a college degree or higher.

To test whether exposure to advertisements influenced the children's food preferences, we calculated a Cochran's Q statistic (Troiano & Flegal, 1998). The proportion of responses for advertised food items was significantly higher for the treatment group compared to the control group (Q_{diff} +8.13, df = 1, p = 0.004). A higher percentage of children seeing the treatment videotape picked the advertised product in 6 of the 7 cases. The largest odds ratios were for food items advertised twice. Treatment group children picked items appearing in novel commercials at an odds ratio of around two to zero, compared to control group children.

Our results demonstrate that television food commercials have immediate effects on young children's food preferences. Given the recent epidemic of childhood obesity and the increased use of media among infants and toddlers, research should investigate the short-, medium-, and long-term effects of advertisements targeting children. Knowledge about the potential impact of this type of media should inform if and how the Federal Communications Commission and the Federal Trade Commission regulate advertisements targeting children.

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Using Computers to Facilitate Social Problem Solving in Head Start Classrooms

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Head Start classrooms increasingly include computers. This study examined an intervention designed to encourage cooperative computer use in Head Start children. We focused on two situations: sharing the mouse and helping a friend. Sharing involves negotiation over turn taking, while helping a friend involves collaboration between peers. Though both situations involve conflict management skills, we predicted that sharing would cause a higher level of conflict than helping (Lauren, Hartup, & Koplas, 1996).

Our study examined changes in adult intervention and children's ability to cooperate across three sessions. Over time, we expected less teacher intervention and more cooperation among children (Benyamini, Pak, & Castelan, 1997).

Seventeen children from a Head Start classroom were included in the study (3 children declined to participate, so the final sample size was 14; 5 girls and 9 boys). Children were introduced to 'Millie's Math House' (1992) in small groups. Next, three computer rules were discussed: (a) find a friend, (b) share the mouse, and (c) help a friend. Two or more children worked together during three 1-hour center sessions, with facilitation by an adult when needed. We videotaped the children, transcribed the videotapes, and trained two coders to document facilitator statements and children's sharing and helping behavior. We also examined whether behavior was spontaneous or elicited by a peer, a teacher, or a peer with teacher support.

Children's helping behaviors changed across the three sessions, χ^2 (4, N = 317) = 28.433, $p < .0001$. Over time, the percentage of requests for help increased, helping behavior decreased slightly, and refusals of help decreased. The percentage of helping behavior that was spontaneous versus elicited was also significantly different across the three sessions, χ^2 (4, N = 189) = 15.776, $p < .003$. Spontaneous helping increased across all three sessions. Help asked for by a peer gradually decreased. Help prompted by a teacher increased from session 1 to session 2, and then decreased during session 3. Children were more skilled by the last session and could better provide assistance.

In contrast, children's sharing behavior was similar across the three sessions. On average, 60% of sharing involved requests for or negotiation over the mouse, 26.3% involved sharing, and 13.7% involved refusals to share. The amount of spontaneous versus elicited sharing remained similar across the three sessions. Most sharing occurred when prompted by a peer's request (44%), a teacher's request (24%), spontaneously (18%), and when supported by a teacher (14%). Interestingly, sharing when the facilitator supported peer requests was nonexistent during the third session, indicating more independent conflict resolution.

Overall the facilitator used more utterances for sharing (82.2%) than helping (17.8%), indicating that sharing behavior required more intervention. As predicted, the number of adult utterances decreased over time, but more for helping than sharing, χ^2 (2, N = 197) = 8.134, $p < .017$.

Clearly, children improved in their ability to collaborate as well as to share the mouse independently. As expected for preschoolers, sharing was the more difficult task. The computer, however, serves as a highly motivating tool to practice such skills in young children.

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Effects of Interactive Television and Live Interaction on the Acquisition of Cognitive Skills in Preschoolers

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Millions of children view TV; the average child watches about 3 hours per day (Huston et al., 1992; Mifflin, 1998). Children watch both entertainment and educational programming, which differ in significant ways (Calvert, Huston, Watkins, & Wright, 1982; Rice, 1984). Compared to other activities engaged in with parents, watching TV leads to less talking between parent and child (Wright, St. Peters, & Huston, 1990). Children tend to watch without parents (St. Peters, Fitch, Huston, Wright, & Eakins, 1991). Children also watch TV while in the care of others. According to research commissioned by PBS, 86% of group child care facilities report that they often use either videotapes or television, and nearly 70% use television as part of their daily routine (Teachey, 1994).

Previous studies found that:

1. Children can learn from TV. Child-specific educational programming has been shown to affect the acquisition of a variety of skills, including vocabulary (Rice, Huston, Truglio, & Wright, 1990), cognitive and social problem solving (e.g., Powers, 1998; Wright et al., 1990), and artistic creativity (Murray, 1998).
2. Adults can help children learn from TV. Children will watch more educational television when their parents restrict viewing of entertainment television and encourage viewing educational television (St. Peters et al., 1991). Adult explanations of educational television content facilitate children's understanding (Collins, Sobol, & Westby, 1981; Huston, Zillmann, & Bryant, 1994). Adult coviewers may facilitate inference making, prosocial learning, and conversing (Collins et al., 1981). Co-observation effects were obtained for lower SES children who watched with their mothers: They watched longer and learned more (Salomon, 1977).
3. Intentional intervention can facilitate learning from TV. The use of viewing guides is associated with significant gains in comprehension (Powers, 1998), and other findings suggest the feasibility of tutorial uses of video (Rice et al., 1990).
4. Current offerings attempt to engage children in interactive viewing. *Blue' s Clues* uses a live-action character that talks to the camera, and often asks the viewers for help in solving the problem at hand. In addition, children's voices can be heard giving advice and direction (from off-camera); this is intended to model the kind of "interactive" behavior

that the viewing children might also perform. This elicitation of interactive behavior may in fact be effective (Crawley, Anderson, Wilder, Williams, & Santomero, 1999).

Given the high proportion of children viewing TV without an adult coviewer both in and out of the home, we asked, "Can programming simulate the facilitative effects of coviewing for children watching TV alone?"

Participants were 49 3- to 5-year-olds (about one fourth African American and Latino, half female) not regularly watching *Blue's Clues.* They were randomly assigned to one of three Experimental ("E") conditions, or to a control ("Wait") condition. Pretest and posttest materials assessed five "cognitive skills" (c.f., Bryant et al., 1998). Skills related to logical sequencing, making inferences, matching on attributes, pattern completion, and visual memory were used. The children watched five episodes of *Blue's Clues,* each focused on two or more skills. In two experimental conditions ("Play" and "Watch & Play") additional materials for practice with the skill games, composed of still photo scans from the program, which depicted a skill being addressed in that program, were also used.

We began with the following questions: (a) Can children's learning be enhanced by their viewing television programs created specifically to teach them particular skills? and (b) Does the assistance of an adult contribute anything more to such learning? It appears from Experiments 1 and 2 that children can learn more from viewing if they also have the opportunity to engage with an adult in play that incorporates certain skills. Importantly, children display a similarly increased level of learning when given the same opportunity to interact with an adult using the same skills, but with no accompanying viewing. These results imply that interaction between a child and an adult, with or without the television, is more efficacious for the child's learning of specific, targeted skills than is just giving the child access to the televised program.

In the face of national calls for increased preparation of children for literacy as articulated in H.R. 1804, the Educate America Act (Goals 2000) and by the America Reads program, this finding makes clear that children cannot be turned over to television programs, however interactive such programs have been designed to be. Television programs have the potential to offer children experiences they might not otherwise have. For example, a relationship was found between time spent watching "Sesame Street" between ages 3 and 5 and improved vocabulary scores (Rice et al., 1990). Such findings suggest potentially powerful effects of television viewing by children. The question is how to capitalize on this potential: What can be done to ensure that a child learns the targeted skill or information from a televised or videotaped presentation?

It appears clear that parents and caregivers, including caregivers in day care centers, can facilitate preschool children's learning from television and videos by interacting with them using the contents and materials of the programs. Television should not be used as prolonged "babysitting" for children in any setting. The addition of adult interaction when television is used could ensure that viewing is an active learning experience.

Future research should attempt to develop specific suggestions for good practice and explore more directly whether and how such learning establishes a foundation for the emergence of reading and writing. Policy for television viewing in child care settings should prepare child care workers to help children learn by paying attention to the television they watch and then playing with children using that content. This suggests the necessity that more educational preparation be required of child care workers.

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Instrument Development and Validation

Assessment Across the Preschool-Kindergarten Transition: Penn Interactive Peer Play Scale (PIPPS)

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Maintaining continuity during the transition from preschool to kindergarten enhances children's school adjustment and academic success. Assistance with the school transition is particularly important for low-income, ethnic minority children, who experience numerous threats to their development and academic achievement. To create continuity, early childhood programs need to promote developmentally appropriate competencies, establish connections between preschool and kindergarten, and facilitate connections between the home and school. Programs can meet these goals through culturally appropriate assessment measures that: (a) evaluate salient competencies, (b) establish links across school settings, and (c) connect the home and school.

The Penn Interactive Peer Play Scale (PIPPS) was developed in response to the need for appropriate assessment measures in early childhood (Fantuzzo, Coolahan, Mendez, McDermott, & Sutton-Smith, 1998). This instrument consists of parent and teacher rating scales and assesses a developmentally appropriate competency: interactive peer play behavior. Peer play interactions are examined at home and in preschool and kindergarten. Studies have demonstrated the construct and concurrent validity of the PIPPS for urban, low-income, ethnic minority children in Head Start (Fantuzzo, Mendez, & Tighe, 1998; Fantuzzo, Coolahan et al., 1998). Both the parent and teacher versions identify the same three play constructs: Play Interaction, Play Disruption, and Play Disconnection. However, research is needed to evaluate the validity of the kindergarten version.

The purpose of this study is to: (a) assess whether the structure of the preschool version generalizes to kindergarten, (b) evaluate the concurrent validity using a standardized measure of social functioning, the Social Skills Rating System (SSRS; Gresham & Elliott, 1990), and (c) assess the predictive validity of the PIPPS to first grade school performance. The participants were 493 ethnic minority kindergarten children in a large, urban area. The sample was 95% African American, 4% Asian, and less than 1% Latino. Exploratory factor analyses assessed the construct validity of the teacher version. The results replicated the three-factor solution found in the preschool versions, supporting the scale's constructs. Factor matching techniques indicated that the constructs demonstrated high levels of congruence with the preschool PIPPS.

The relationship of the PIPPS to the SSRS was examined through canonical variance analyses. Significant relationships were found between the PIPPS and SSRS. Play Interaction was associated with socially skilled behavior, whereas Play Disruption and Play Interaction were related to problem behaviors. These results indicate that the PIPPS identifies important aspects of social competence. Finally, the ability of the PIPPS to predict academic performance was assessed by examining 1st grade academic achievement. Using canonical variance analyses, significant relationships were found between the PIPPS and final report card grades. Thus, the kindergarten PIPPS provides an indication of future school performance.

The results of this study indicate that the PIPPS fills a void in the early childhood assessment technology. This instrument assesses an important competency of early childhood, and attends to cultural contexts. The PIPPS also has the capacity to assess children across the transition from home to school, and from preschool to kindergarten. These capabilities have implications for helping vulnerable children attain success in school.

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Family Involvement & School Readiness: A Multivariate Investigation of the Relationship Between Multiple Dimensions of Family Involvement and School Readiness Outcomes

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The Family Involvement Questionnaire (FIQ; Fantuzzo, Tighe, & Childs, in press) was developed in response to the need for a multidimensional scale of family involvement that was developmentally and culturally sensitive to low-income, urban children in preschool through 1st grade. The purpose of this study was twofold: (a) to validate the FIQ for urban students in preschool, kindergarten, and 1st grade; and (b) to examine the relationship between FIQ dimensions and multiple school readiness outcomes for Head Start children. To meet these objectives the construct validity of the FIQ was investigated by subjecting the FIQ ratings obtained from parents of preschool, kindergarten, and 1st grade children to common factor analysis. Next, the multivariate relationships between empirically derived FIQ factors and multidimensional measures of learning behaviors, classroom behavior problems, and receptive vocabulary were assessed using canonical correlation analyses.

The development process of the FIQ produced a multivariate scale that met multiple construct validity criteria and yielded three stable dimensions: (a) School-Based Involvement Activity, (b) Home-Based Involvement Activity, and (c) Home-School Conferencing. These three empirically derived factors were congruent with Epstein's multidimensional framework (Epstein, 1995) and comport with the literature underscoring the importance of family involvement in their children's education.

The sample for the validation study was drawn from preschool (Head Start or Comprehensive Day Care), kindergarten, and 1st grade classrooms throughout the school district of Philadelphia. After parental permission was obtained, parents completed a brief demographic questionnaire and the FIQ. Head Start teachers then assessed the learning behaviors and classroom behavior problems of 131 children on two standardized measures: (a) Preschool

Learning Behavior Scale (PLBS; McDermott, Green, Francis, & Stott, 1996) and (b) Conners' Teacher Rating Scale (CTRS-28; Conners, 1990). Additionally, a measure of receptive vocabulary, the Peabody Picture Vocabulary Test-Third Edition (PPVT-III; Dunn & Dunn, 1997), was administered to the children.

In providing us with a multidimensional picture of family involvement behaviors, the FIQ allowed us to examine the impact of family involvement on multiple aspects of children's school readiness. Exploratory analyses between the FIQ and the measures of school readiness revealed several significant relationships. Home- and School-involvement were both positively related to all three dimensions of the PLBS: Competence Motivation, Attention, and Attitude. Additionally, Home-involvement was negatively related to all three dimensions of the CTRS-28: Conduct Problems, Hyperactivity, and Passivity/Inattention. School-based involvement was also negatively related to Conduct Problems and Passivity/Inattention on the CTRS-28. All three dimensions of family involvement were positively related to children's scores on the PPVT.

These data support the first empirically derived measure of family involvement in early childhood education. Additionally, the preliminary analyses of school readiness suggest important relationships between home-school connections and readiness outcomes. The concurrent examination of the relationships between FIQ factors and key readiness outcomes across multiple domains of child functioning in the present study extends our investigation of family involvement in important ways.

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The Infant-Toddler Social Emotional Assessment (ITSEA)

Alice S. Carter, Margaret Briggs-Gowan

PRESENTERS: Alice S. Carter, Stephanie M. Jones, Margaret Briggs-Gowan

A new adult-report measure of infant and toddler social-emotional problem behaviors and competencies called the Infant-Toddler Social Emotional Assessment (ITSEA) was introduced. This measure may be extremely useful for screening in Early Head Start. Reliability and validity information from a representative birth cohort sample of 1,279 was presented.

(Abstract from program; poster summary not available for publication.)

Head Start Children's Pre-Literacy and Social Outcomes In Relation To Home Learning Environment and Social Risk Factors

Martha Foster, Frances McCarty, Richard Lambert, Sarah Franze, Martha Abbott-Shim

PRESENTERS: Martha Foster, Sarah Franze

The quality of the home environment is widely recognized as a strong contributor to young children's language competence and to their subsequent educational success. One way of capturing the quality of the home environment is to use socioeconomic status (SES) as indexed by family income, parent education, and/or occupation as a distal measure of family resources that broadly impact a child's development. Alternative approaches to describing the home environment involve identifying specific proximal risk factors that impede child development, or specific parent/family behaviors that promote child development. Because each taps a different aspect of the child's home environment, we used all three of these strategies to explore the family's impact on outcomes for Head Start children. Using structural equation modeling, the present study examined the effects of SES, social risk factors, and home learning environment on language and pre-literacy outcomes and on children's social functioning and problem behaviors.

The Georgia State University Research Center on Head Start Quality in partnership with three Head Start programs located in both rural and urban regions of the Southeast obtained family and child data for 325 of the participating families. The children ranged in age from 42 months to 76 months ($M = 59.1$, $SD = 5.7$); 50.5% of the sample was male. The ethnic background of the children was distributed as follows: African American (64.3%), White (29.8%), Other (5.9%). The following measures were utilized in this study: Peabody Picture Vocabulary Test–Third Edition (Dunn & Dunn, 1997), Early Phonemic Awareness Profile (Dickinson & Chaney, 1997), and the Adaptive Social Behavior Inventory (Hogan, Scott, & Bauer, 1992). In addition, the Family and Child Experiences Survey (FACES) Parent Interview (Administration on Children, Youth, and Families, 1998), designed to assess a variety of constructs related to the family, was administered to the child's primary caregiver.

Data analyses were conducted using structural equation modeling. The latent variables of interest in this study were SES, social risk, and home learning environment. In addition, there were two latent outcome variables of interest: child pre-literacy/language and child social functioning/problem behaviors. Separate analyses were conducted for the two child outcomes. The pattern of relationship among the latent variables was investigated using three models. The first model, a very simple model, had only one path from SES to the child outcome. This represents a more traditional approach to examining the effects of the home environment, as measured by SES alone, on child outcomes. While the literature generally supports this model, in consideration of the income eligibility guidelines, it seems important in this particular population to examine how SES functions with other risk-related constructs to impact child outcomes. Therefore, the second model included two additional constructs: social risk and home learning environment. In the third model, the direct path from SES to the child outcome was dropped from the model. The results were very similar for both the pre-literacy/language and social functioning outcomes. When social risk and home learning environment are considered, the direct path from SES to the child outcome becomes statistically insignificant. Instead, SES indirectly affects the child outcomes via social risk and the home learning environment.

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Development of the Service Utilization Survey (SUS) for Use With Parents of Preschool-Age Children

Alison H. Melley, Denise L. Newman, Karen M. McCollam

PRESENTERS: Alison H. Melley, Denise L. Newman

The Service Utilization Survey (SUS) is being developed for use in a large, longitudinal study of risk and resilience for the development of learning and behavior problems in a rural poverty sample of preschool children. Using the SUS, we hope to determine how parental advocacy skills and confidence in negotiating the early years of the educational system affect children's school readiness. Most parents of preschool children have not yet had substantial contact with teachers and other professionals. Given that existing service utilization surveys ask only about parents' past experiences, we needed a survey that would ask about expectations for the future (Pavuluri, Luk, & McGee, 1996; Hornblow, Bushnell, Wells, Joyce, & Oakley-Brown, 1990).

We developed 50 SUS items scored on a two-point scale (1 = Mostly Agree, 2 = Mostly Disagree). Questions concern children's behavioral, emotional, and learning problems, including whether or not a parent has concerns about their child and their feelings about asking for help. Secondly, there are questions about parents' confidence in navigating the system if their child does need special services. Finally, there are questions concerning parents' interactions with professionals.

Sixty parents from Head Start and other preschool programs completed the survey. The SUS items were then submitted to principal components analysis, and two main scales were identified. The first scale has an internal consistency (Cronbach's alpha) of .88 and contains 24 items related to a parent's confidence in handling problems with their children. Parents who endorse these items feel confident in parenting, are willing to ask for help, and feel that they can navigate the system adequately. The second scale has an internal consistency coefficient of .69 and contains 8 items regarding a parent's confidence in the professionals that care for their child. Parents who endorse these items trust that educators and doctors will listen to them and will help with any emotional, behavioral, or learning problems that may arise.

Principal components analysis and alpha coefficients are derived from Classical Test Theory (CTT; Crocker & Algina, 1986). However, CTT does not provide all of the information we need to understand the meaning and patterning of responses to the SUS items. Item response theory (IRT; Hambleton, Swaminathan, & Rogers 1991) provides other options. With IRT, we can determine which items within each scale provide the most information about the construct of interest. Our preliminary IRT results demonstrate the SUS's ability to represent a wide range of attitudes toward service utilization, and indicate that this measure may also be useful in a rural minority population. We will highlight, in this presentation, the usefulness of applying IRT in evaluation of measures to be used with Head Start children and families.

Our next task regarding these scales is to test specific predictions about children's school readiness and eventual school success. It is likely that our first scale will be the more important variable when it comes to a child's performance, with the second scale acting as a moderator of success. These possibilities will be discussed further in this presentation, along with suggestions for future research.

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The Differences Between Screening Tests That are Translated, Normed, or Adapted

Carol Mardell-Czudnowski, Tsuey-Hwa Chen, Dorothea S. Goldenberg

PRESENTER: Carol Mardell-Czudnowski

According to the United States Census (1999), 11.2 % of the current United States population is of Latino origin. Although a large number of Latino adults and children of school age are fluent in English, many preschool children, especially those of recent immigrants, are either monolingual Spanish speakers or have limited English proficiency (LEP). Since federal law mandates that a child be screened in one's primary language to obtain as unbiased an assessment as possible, it is essential that a screening test be developed that takes into account both cultural and linguistic differences.

Developmental Indicators for the Assessment of Learning (DIAL-3; Mardell-Czudnowski & Goldenberg, 1998) is used as the example of a preschool screening test that has been adapted and normed for the above purpose. It is a 30-minute individually administered screening test designed to assess children's developmental skills and identify 3- through 6-year-olds with potential delays. DIAL-3 consists of the five screening areas mandated by the Individuals with Disabilities Education Act (IDEA; U.S. Dept. of Education, 1997): Motor, Concepts, Language, Self-Help Development, and Social Development. The first three areas assess children directly; the last two areas use parental observations.

The development of the two language versions of DIAL-3 were concurrent and went beyond mere translation, the practice of converting a test from one language to another. Rather, it followed the rigorous test adaptation process published by the International Test Commission (Hambleton, 1994). Adaptation refers to the broader process of adjusting, accommodating, and validating the test for use in different linguistic or cultural contexts, insuring that the same constructs are measured reliably.

The procedure for developing the Spanish version of DIAL-3 involved both content development (scrupulous adaptation of testing materials, noting the differences in phonological, semantic, and syntactic characteristics between English and Spanish as well as the different cultural experiences and expectations that influence children's development) and psychometric investigations (establishment of construct and measurement unit equivalency). Separate monolingual groups (605 Spanish-speaking children and 1,560 English-speaking children) were used to collect data for linking the two language versions onto a common measurement scale.

Many multilingual tests have separate norms for each language. The problem of using separate norms for the Spanish DIAL-3 lies in the fact that the Latino community in the United States is forever growing and forever changing, and that their educational experiences are quite disparate, both within the Latino community and across the entire United States population. Therefore, a separate set of norms developed using only a monolingual Spanish-speaking sample would neither be representative of the entire Latino community, nor sufficient to reflect the performance standards set for the general United States population.

By using equating techniques, both English-speaking and Spanish-speaking children are assessed using the same set of standards and are provided equal opportunities for further educational interventions and/or programming. Thus, the Spanish DIAL-3 provides a viable instrument for professionals to assess the developmental skills of monolingual and or LEP Latino children to identify potential developmental delays and provide appropriate intervention opportunities. This has great implications for the Latino community in the United States.

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Assessment of Parent-Child Play: Refining the Parent/Caregiver Involvement Scale for Practitioners

Marilee Comfort, C. Wayne Jones, Donald G. Unger

PRESENTERS: Marilee Comfort, C. Wayne Jones

Many early childhood intervention programs, particularly those serving children from birth to 3 years in home visiting and Early Head Start programs, focus on parenting behavior in order to promote children's development (Moss & Gotts, 1998; Powers & Fenichel, 1999). Research has demonstrated the valuable influence of caregiver responsiveness, facilitation of learning experiences, and emotional availability on a child's early development (Guralnick, 1997). Parenting intervention aims to build family strengths that will serve as protective factors throughout a child's life. It also challenges home visitors, infant-toddler specialists, and other early childhood practitioners to become excellent observers, not only of child behavior, but also of parent-child interaction patterns. Such observational assessment can identify parenting behaviors that promote or hinder a child's development. These parenting behaviors then can be incorporated into individualized family goal plans and assessed over time to evaluate family and program outcomes.

One strategy to cultivate service providers' observational skills is training in the use of reliable and valid parent-child interaction assessments. Although there are a number of instruments available, most have been designed for research studies. Given this narrow purpose, they are often time and labor intensive to administer, score, and interpret. Such instruments have limited usefulness for providers.

The purpose of this preliminary study was to transform a widely used research instrument, the Parent/Caregiver Involvement Scale (P/CIS; Farran, Kasari, Comfort, & Jay, 1986), into a new provider-friendly scale for assessing observations of parent and child behaviors during free play.

Several procedures were used to guide transformation of the P/CIS to a new provider-friendly scale. These included: (a) factor and correlational analyses of P/CIS data collected in a comprehensive study of 214 children and families enrolled in urban, community-based early childhood programs (i.e., Early Intervention Programs, Head Starts, and "At-Risk" preschools; Jones & Unger, 2000); (b) selection of items meaningful to intervention by experienced P/CIS users and practitioners; and (c) provider focus group regarding useful content and format of the parent-child interaction scale.

This preliminary study proposes a new provider-friendly scale that includes fewer items, provider-friendly language, behaviors meaningful to intervention, and accessible, effective training and scoring. Next steps in the development of the scale for early childhood service providers will be a family focus group regarding content and language, the addition of child-oriented items, and field-testing accompanied by a psychometric study.

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Head Start Parenting Practices: Evidence for the Construct and Concurrent Validity of a Multivariate Measure With Urban Head Start Parents

Christine McWayne, Kathleen Coolahan

PRESENTERS: Christine McWayne, Kathleen Coolahan

For young children, successful resolution of developmentally salient challenges is greatly influenced by the nature of the parent-child relationship, the most proximal system influence (Atilli, 1989; Belsky, 1984). Parenting behaviors that occur within these interactions can either enhance or hinder a child's negotiation of developmental tasks.

Research investigating aspects of parent-child interactions has differentiated patterns of parenting practices or styles. Baumrind's (1971) identification of Authoritative, Authoritarian, and Permissive styles of parenting represents the most seminal work in this area.

However, a major criticism launched against the parenting styles literature has been its neglect of low-income and minority families in studies (Sinatz & Smith, 1994). The three constructs described by Baumrind were empirically derived through cluster and factor analyses of data obtained from samples of White, middle-class parents. Despite the lack of evidence for generalizability, these dimensions have been used widely by family researchers to characterize distinct types of childrearing behaviors across diverse populations. Minority child development scholars contend that, by inappropriately applying theoretical constructs and normative data derived from the study of White, middle-class groups, researchers render minority groups vulnerable to labels of deviance (i.e., parenting styles as deficient; Spencer 1990).

Head Start is a key institution in redressing this major criticism of the parenting practice literature. As part of an effort to identify and cultivate competence and partnership, programs are committed to illuminating high quality parenting practices that foster optimal child development and to developing educational services for parents that strengthen these practices (U.S. Department of Health and Human Services, 1998). However, in order to provide quality services that enhance parenting abilities, Head Start must have empirically derived information informed by an "ecologically valid science of parenting" (Garbarino & Kostelny, 1993, p. 219).

The present study examined the construct and concurrent validity of a modified version of the Parenting Practice Questionnaire (PPQ; Robinson, Mandleco, Olsen, Bancroft-Andrews, McNeilly, & Nelson, 1995), specifically revised with urban Head Start parents (see Coolahan, 1997). Caregivers of 581 preschool children in a large urban school district's Prekindergarten Head Start program participated. The sample was 88% African American, 8% White, 2.5% Latino, and 1.5% Asian. Construct validity was initially explored through common factor analytic procedures, using multiple criteria. The model retaining three orthogonal components, rotated by varimax, met all stated criteria. In addition, cross-validation of the whole sample with a randomly derived subsample supported the three-dimensional structure. Confirmatory factor analyses results indicated that no items migrated from their hypothesized cluster. Therefore, findings indicated that these conceptualizations of parenting behaviors are applicable to parents in a large urban Head Start program. Evidence for divergent and convergent validity was revealed through correlation analyses with other measures of parent-child interactions, including another self-report measure, the Parent-Child Relationship Inventory (PCRI; Gerard, 1994) and observational data obtained during contextually relevant parent-child interactions.

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Refining Measures of Early Head Start Program Service "Dose"

Richard A. Faldowski, Susan G. Pickrel, Michael J. Brondino, Anita F. Kieslich

PRESENTER: Richard A. Faldowski

This poster describes one component of the local research project being conducted at the South Carolina site in the Early Head Start (EHS) Research Consortium, where Medical University of South Carolina (MUSC) researchers and Sumter, South Carolina program partners are collecting data to refine the measurement of program service "dose" for individual EHS participants. In contrast to the common practice of equating psychosocial intervention dose with quantities of various types of services provided, our approach adopts the perspective that realistic measures of program dose must take into account: (a) the types and nature of services provided by the program, (b) the degree of family and child participation in available services, and (c) what actually occurred during service provision. This presentation describes methods and data sources for refining measures of program service dose and our plans for using the refined measures in outcome analyses when outcome data become available.

Early Head Start (EHS) is 2-generation (child and parent), psychosocial intervention providing comprehensive services designed to enhance child development and support the family during a child's critical first 3 years of life. The Sumter School District 17 Early Head Start Program is a school-based EHS program designed to serve the needs of teenage and young mothers in a school district with high rates of school dropout (between 8th and 12th grades), teen pregnancy, and alcohol/drug abuse. The program provides center-based, home-based, and combination service configurations, as well as therapeutic child care for children and mothers with more intensive service needs (e.g., risk of out-of-home placement, substantiated child abuse/neglect, maternal substance abuse, or other mental health conditions).

The most commonly employed conception of psychosocial intervention "dose" equates it with program participation counts (e.g., number of day care center attendance days, number of completed home visits, or home visit hours). Often "dose," defined in this way, is segmented into low/medium/high categories and entered into outcome analyses as a static covariate or mediator variable. This conception fails to account for intervention component exposure from multiple sources, fails to recognize variability in "amount" of intervention delivered by various sources, and fails to recognize variations in "amount" of intervention delivered from different sources over time.

In our refined conception of program service dose, we argue that program participation counts provide, at best, an upper bound on actual intervention component dose delivered. A more realistic estimate of intervention component dose should weight a child/family's amount of participation in various program activities by the degree to which a target intervention component is delivered during each activity. The Sumter EHS program has collected behavioral time samples of program staff activities suitable for use in estimating exposure to multiple intervention components (e.g., child development stimulation, parent support...) from multiple sources over time. Through the use of multilevel, longitudinal statistical models, our framework mitigates limitations on traditional conceptions of psychosocial intervention dose and easily allows time- and source-varying intervention component exposure to be related to outcome changes over time.

Parental Involvement and Activities Inventory: A Process-Oriented Measure of Parental Involvement

Karen M. Gavin, Daryl B. Greenfield

PRESENTER: Karen Gavin

The primary purpose of this study was to develop the Parent Involvement and Activities Inventory (PIAI), a process-oriented measure of parent involvement. The second aim was to evaluate the psychometric properties of the new measure. The measure was developed with collaboration between caregivers of young children, elementary school teachers, social workers, a parent involvement coordinator of an elementary school, and a university researcher. First, focus groups and meetings were conducted to generate information about parent involvement practices. Later, the parent involvement coordinator and the caregivers critiqued the completed measure resulting in additional changes. The 13-item rating scale yields two dimensions of involvement: (a) In-Home Involvement and (b) In-School Involvement. Each item is represented on a 5-interval continuum of descriptors about parent-child or parent-school interactions.

The participants for this study included 82 caregivers with at least one child in preschool, kindergarten, or 1st grade. All of the children attended Title 1 elementary schools in southern Florida. Eighty-three caregivers were interviewed at home while the remainder occurred at the school site or at their place of employment. Each participant completed the PIAI along with a variety of additional measures. Forty-one participants completed the PIAI during follow-up interviews 4 weeks later.

The ethnic/racial composition of the families included approximately 93% African American and a small percentage of Caribbean, Latino, and White families. The caregivers' ages ranged from 21 to 73 years ($M = 34.49$). The mean family income was between $400 and $600 per month, with 60% reporting monthly incomes of $800 or less per household. In addition, the majority of participants were unemployed at the time of the interview.

In order to evaluate the psychometric qualities, correlational and factor analytic methods were used to analyze the PIAI and the two underlying factors: Home Involvement and School Involvement. A revised two-factor structure model was chosen as the most acceptable model of the PIAI data. The model produced a SCALED chi-square of 63.33 (51, $N = 70$), $p < .15$. The Comparative Fit Index (CFI) = .96 and the Tucker-Lewis Index (TLI) = .94, alternate fit indices, met the recommended criteria for relatively good fit with a Root Mean Square Error of Approximation (RMSEA) of .06. Hu & Bentler (1999) suggest cutoff values close to .95 for the CFI and the TLI and close to .06 for the RMSEA are needed for a relatively good fit between the data and the proposed model structure. Also, the reliability of the two PIAI factors indicated good internal consistency of scores.

The findings lend support to the PIAI as a sound measure of parental involvement for families of young children. In addition, the proposed two-factor was supported with the possibility of more attention to community involvement. Further research is needed to continue examining other possible involvement interactions that occur in families with young children. There are practical implications for families, educators, and educational researchers.

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The Measurement of Within-Child Protective Factors in Preschool Children

Paul A. LeBuffe

PRESENTER: Paul A. LeBuffe

The development, psychometric properties, and applications of the Devereux Early Childhood Assessment, a nationally-normed, empirically sound measure of behaviors related to resiliency in preschoolers were presented. The nature of within-child protective factors and the use of this instrument in primary prevention programs were emphasized.

(Abstract from program; poster summary not available for publication.)

Outcome Measures for Early Head Start: Issues in Developmental Assessment

Harriett D. Romo, Maria Teresa de la Piedra

PRESENTERS: Harriett D. Romo

Child outcomes are important in the evaluation of Early Head Start (EHS) programs (U. S. General Accounting Office; GAO, 1998). This paper explores the use of a nationally normed child developmental assessment, the (Ages and Stages Questionnaire; ASQ, 1995). First, the researchers examined the results of the ASQ administered to 56 children during 1998 and 1999 in five developmental areas: (a) communication, (b) social and emotional, (c) gross motor, (d) fine motor, and (e) problem solving. Additional data were drawn from home observations and interviews with staff and parents who used the questionnaires.

Cultures provide parents and teachers with particular theories about how children develop and learn, how they become functional members of their society, and the role of parents, schools, and other adults in socializing children (Gaskins, 1996). These variations in beliefs influence how mothers interact with their infants. Scheiffelin and Ochs (1986) and Ochs (1988) found that mother-infant styles of communication or "communicative accommodation" varied because of different culture-specific norms. Mexican origin families often have expectations of children distinct from those of middle-class Anglo Americans (Delgado-Gaitan, Trueba, & Trueba, 1991; Valdés, 1996; LeVine, Miller, Richman, & LeVine, 1996; Levine, 1974, 1977). The ASQ, for example, expects children to be independent in many activities at very early ages (i.e., putting on clothes, eating). The mothers in this study believed that good mothers dressed and fed their children and assisted them in many of the same activities the ASQ expected children to do independently. In the home, adults and older siblings helped a 2-year-old understand unfamiliar words by relating them to familiar objects and drawing meaning from interactional contexts. In the ASQ, children were expected to "name" items isolated from any meaningful context. In other ways the instrument may misrepresent the abilities of Mexican origin children. For example, a mother asked if her 2-year-old could combine several concepts in two- or three-word sentences responded "No." Yet, later she gave examples of this task. Mothers could not recall words their children used infrequently, or they misunderstood the questions.

Staff liked the ASQ because it identified important developmental stages. However, parents became worried if their child could not or would not complete a task. Often, inadequate responses were a result of fatigue, lack of attention, or disinterest rather than developmental delays. Demonstrating tasks to Spanish-dominant parents, then having parents ask the child to complete the tasks increased time required to administer the questionnaire. Parents often had more pressing issues to discuss during home visits. Although the questionnaire was designed to be completed by parents, teachers administered the questionnaire to children in center-based care and shared the results with parents. Modifications made comparisons with the normed version of the questionnaire invalid, but the result was an assessment instrument more useful to the families and staff.

Administering the ASQ gave staff the confidence that they were complying with Head Start expectations of producing "child outcomes." However, this case study raises cautions about using developmental instruments for assessing child outcomes in culturally diverse settings.

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Language and Emergent Literacy

Enhancing Similarity Reasoning in Head Start Children

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PRESENTER: Elena Malofeeva

A major challenge for educators is to create interventions that would help the development of emerging skills (Vygotsky, 1978). Whereas previous dynamic assessment research has compared the influence of different methods of instruction (e.g., mediation vs. graduated prompts, scaffolded vs. swing; Lidz, 1991), one purpose of the present study was to use the widely used methods of classroom instruction (i.e., hands-on activities, reading) to investigate how they affect learning and transfer abilities of 3- 5-year-old children. Specifically, we looked at whether reading aloud to Head Start children and talking about comparisons between different characters of the book added significantly to the development of their comparison skills over and above the effect of hands-on activities.

One hundred twenty-six Head Start children were randomly assigned to one of the three conditions: (a) activities and reading, (b) activities only, or (c) attention control. All children took three tests (pre, post, and delayed posttests) on both open-ended and close-ended similarity measures (Malofeeva & Day, 2000). To assess children's performance on transfer comparison tests, the same types of measures were used, but their content was different: Rather than making comparisons on an animal topic, children were assessed on another familiar topic (i.e., body parts). Only children in the two experimental conditions received individual and group training on size, color, and function comparisons (twice a week for 2 months). In the activities and reading condition, children not only did the same individual and group activities, but they were taught to compare animals through thematically related book readings and book activities.

A MANCOVA: 3 (Condition: activity and reading, activity only, and control) by 2 (Time: posttest, delayed posttest) by 2 (Topic: size-and-color, function) on the composite comparison scores was run to investigate children's comparison performance. Pretest on size-and-color and function, Peabody Picture Vocabulary Test-Revised (PPVT-R; Dunn & Dunn, 1981) scores, knowledge about animals, and child age were used as covariates. Children's performance on comparison varied as a function of condition [$F(2,81) = 15.35$, $p<.001$]. Children in each of the experimental conditions provided more correct responses than children in the control condition [Mcont = -.775, SE = .18; Mact.only = .49, SE = .15; $F(1,81) = 29.46$ compared to Tukey's critical adjustment of 5.78; and Mact + read = .213, SE = .14; $F(1,81) = 18.33$—versus Tukey's critical adjustment of 5.78]. The present study yielded support for the hypothesis that comparison skills are modifiable and can be further improved through appropriate training (i.e., when both individual and group activities, and book readings are used to teach comparison skills).

Children in the most extensive instructional condition, however, did not outperform children in the less extensive instructional condition [Mact.only = .49, SE = .15; Mact + read = .213, SE = .14; $F(1,81) = 1.90$ compared to Tukey's critical adjustment of 5.78]. The most extensive instruction could still be considered a better teaching strategy than hands-on activities only due to the added effects of reading aloud on children's emerging literacy skills. Evidence to conclude that comparison skills could be transferred to another familiar domain was not found.

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Home Literacy Experiences of Three Young Dominican Children Living in New York City: Implications for Teaching in Urban Settings

M. Victoria Rodriguez

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The literature on early literacy development indicates that children's exploration of print starts before they go to school. Exploring books, exposure to literacy artifacts, and adult-child interaction around print are part of these early literacy experiences (Cochran-Smith, 1984, Ferreiro & Teberosky, 1982; Heath, 1983; Leichter, 1984; Schieffelin & Gilmore, 1993; Taylor 1983; Taylor & Dorsey-Gaines, 1988, Vygotskii, 1978). Children come to school with diverse literacy experiences that are extremely important in learning to read and write.

During the 1990s, Dominicans were one of the fastest growing immigrant groups in New York City. Despite the significant number of Dominican children in the public school system there is virtually no research on their early literacy experiences, which may make the school system somewhat unprepared to educate these students. This study (Rodriguez, 1995, 1999) explores the early literacy experiences of three Dominican children in the context of their life at home. This presentation addresses: (a) how Virginia Suarez (2 years, 8 months), Jesús Velázquez (4 years, 5 months), and Roberto Martínez (3 years, 9 months) explored print on their own and interacted with more mature literates in the context of their life at home; and (b) the implications that these findings would have for literacy instruction in school.

Data were collected during a school year. Each participant was observed 3 times a week for 2 hours per session totaling about 200 hours for the year. Literacy events were defined as any reading or writing activity utilizing literacy artifacts, such as magazines, children's books, mail, paper, and pencils, initiated by anyone in the presence of the participant children. The researcher took notes, audiotaped significant literacy events, talked with the mothers about their literacy experiences with their children, and interviewed them.

The families were selected based on these criteria: (a) mother was born in the Dominican Republic, (b) there was a child in the family between 2½ and 5 years of age, (c) family income was $15,000 or less for a family of four members, and (d) the family agreed to participate in the study.

The characteristics of these children's families were as follows: (a) the three mothers were born in villages in the Dominican Republic and all have been living in New York City in the Washington Heights-Inwood area for more than 10 years; (b) none of the fathers were living in the home, although Mr. Suarez visited frequently; (c) all three families were on welfare; (d) the three participant children were the youngest in their families (Virginia was the youngest in a family of six, Jesús in a family of two, and Roberto in a family of four); and (e) mothers' formal education varied (Mrs. Suarez and Martínez had attended a local community college, Mrs. Velázquez took some English and beautician courses).

The targeted children initiated their own literacy events when people around them engaged in literacy activities such as doing homework, reading the mail, reading women's magazines or romance novels, or when they came across literacy artifacts such as pens, pencils, crayons, paper, books, magazines, and newspapers.

Mothers, siblings, neighbors, and friends interacted with the children in the following ways: (a) being role models, (b) providing them with literacy artifacts directly or indirectly, and (c) teaching them. Mothers read and wrote in front of their children but rarely initiated an activity around print. However, once their children had initiated the activity mothers encouraged them by giving feedback and praising what they were doing. Mothers modeled for their children, were responsive to their cues, and suggested topics such as the colors or counting.

The participants were also involved in literacy activities when watching television, listening to music, singing, and playing. Print was not only mediated by their mothers, siblings, and friends, but by the available media today, television and music, and by play.

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Using Peer-Group Practices to Promote Narrative Development and Emergent Literacy in Low-Income Children

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This study examined whether and how a storytelling and story acting practice can serve as a powerful context for enhancing the development of narrative competence and the foundations of emergent literacy in low-income children. Data were drawn from two Head Start classrooms (each with 17 children, ages 3-5 years): (a) a target, where this storytelling and story acting was introduced and used for the entire school year, and (b) a control. Analysis of these data has yielded strong and promising results.

This practice, pioneered by Paley (1990), has been used in classrooms across the country, though largely in middle-class preschools. Each day, any child could dictate a story to a teacher, who recorded the story as the child told it. At the end of the day, these stories were read aloud to the entire class, while the child/authors and their chosen friends dramatized them. One result was that children told these stories, not only to adults, but also primarily to each other; furthermore, this activity was embedded in children's everyday group life.

It is increasingly recognized that preschool children's development of narrative competence and related decontextualized skills serves as a crucial foundation for their later acquisition of literacy and success in formal education (Snow, 1983; Snow & Dickinson, 1991). There is also considerable evidence of social class differences in the kinds of narrative-related skills that children bring with them to elementary school, which favor the long-term educational success of middle-class over low-income children (Snow & Dickinson, 1987; Feagans & Farran, 1994). Research investigating the contexts that best promote these relevant skills in young children has focused exclusively on modes of adult-child interaction. By itself, this one-sided focus overlooks the potential complementary contributions of various forms of peer-group activity, when appropriately integrated into preschool settings. Nicolopoulou's (1996) previous research, conducted in middle-class preschools, has demonstrated that preschoolers' participation in this type of storytelling and story acting practice can dramatically enhance their narrative development. There are good reasons to expect that this practice should be even more valuable for low-income children.

In this study, all the stories generated in the target classroom were analyzed for thematic content, structural complexity, and character representation. In addition, the Expressive One-Word Vocabulary Test (EVT; Williams, 1997) and a Figurine-Based Narrative Task (designed by the authors) were administered to both the target and control classrooms at the beginning and end of the school year. The results strongly confirmed that the children's participation in this practice significantly promoted both: (a) children' decontextualized oral language skills, as demonstrated by improvement in EVT scores; and (b) children's narrative abilities, as demonstrated by improvements in their spontaneous stories and in their figurine-based narratives.

These very promising results have important implications for both developmental research and educational practice. They suggest that an ongoing storytelling and story acting practice, when effectively integrated into the preschool curriculum, can be a powerful context for enhancing the narrative development and language skills of low-income children. More generally, they suggest that activities that combine spontaneity with peer-group participation can be important resources for the education of young children.

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Emergent Literacy and Behavior Problems Among Former Head Start Children: The Effects of Classroom Orientation

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The benefits of academic instruction in kindergarten have been debated for years. Currently, research is inconclusive in its support of a single best approach for kindergarten education. Some research supports an academic approach in kindergarten, the main goal of which is to develop children's basic academic skills and competencies. Support for a developmental orientation in early learning experiences can also be found. Children who participate in a developmentally oriented classroom are not taught concepts directly, but rather learn them through self-chosen and directed activities.

Furthermore, outcomes may vary according to a child's behavioral characteristics. For instance, hyperactivity has been shown to hinder the process of learning to read by interfering with the acquisition of prereading skills (Vaughn, Hogan, Lancelotta, Shapiro, & Walker, 1992). Given the high rate of hyperactive and asocial behavior identified in children attending Head Start programs, it would be beneficial to understand the educational approaches that are most effective for low SES children upon entering formal schooling.

The present study examined differential program effects on behavioral and emergent literacy skills of former Head Start children now attending kindergarten. Fifty-four kindergarten teachers completed a Q-sort assessment designed to measure the degree to which their classroom was developmentally or academically focused (Payne, 1996). Four different kindergarten models were identified through cluster analysis of teacher responses. Cluster one was composed of those teachers endorsing social development as the primary focus of their curriculum (Developmental). Cluster two represented those teachers whose primary focus was self-esteem development with a secondary focus on social skills (Self-esteem 2). The third cluster identified teachers who also focused primarily on self-esteem development, but who had a secondary focus on academic skills (Self-esteem 1). Cluster four identified teachers whose primary focus was in academic skill development (Academic).

Participants for this study were 162 children who had previously attended Head Start preschool on Long Island, New York. The children's teachers reported on the level of hyperactive and asocial behavior exhibited by students in their kindergarten classrooms using the Asocial and Hyperactive scales of the Conners Teacher Rating Scale (CTRS; Conners, 1969). Assessments of the children's emergent literacy skills were obtained using the Developing Skills Checklist (DSC; CTB, 1990) at the end of kindergarten.

In order to assess differences in emergent literacy skills and problem behaviors of children in different classroom models, we conducted a one-way MANOVA. We found significant effects of classroom type on the kindergarten DSC scores, Conners Asocial scores, and Conners Hyperactivity scores. Post hoc tests revealed that children in the Academic cluster performed significantly better on emergent literacy tasks than children in more developmentally oriented classrooms, and were reported to have lower levels of asocial and hyperactive behavior. In addition, children in the Developmental cluster exhibited higher levels of asocial behavior than children in either of the Self-esteem clusters.

Although the implications of the present study are far reaching with respect to the current educational climate, caution must be taken in view of the relatively small sample size. Future research investigating this issue should strive to clarify possible interactions between classroom orientation, behavior problems, and emergent literacy skills in low-income populations.

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The Role of Narratives in Low-Income, Black Children's False Belief Performance

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PRESENTER: Melvin N. Wilson

When researchers investigate the issue of economic status and false belief (FB) performance, they typically find that low-income children are less likely to pass FB tasks than middle-income children are (Cole & Mitchell, 1998). These researchers either give no explanation for why low-income children are less likely to pass (Holmes, Black, & Miller, 1996; Hughes & Dunn, 1998) or they explain it by authoritarian parenting styles that provide children with little insight into other's mental states (Cole & Mitchell). None of the researchers discussed cultural practices that may help or hinder the children's grasp of mental states, even though some studies (Holmes, Black, & Miller; Hughes & Dunn) had adequate representation of Black children.

This study examined FB in an ethnically diverse population using a FB task designed to enhance low-income, Black children's performance. Prior research has demonstrated that storytelling is a valued and common part of Black culture (Heath, 1982; Sperry & Sperry, 1995; Sperry & Sperry, 1996). Given Black children's cultural experience with storytelling, it is hypothesized that they will perform better on false belief tasks that are embedded in narratives than White children will.

Thirty-six Black children (M = 53 months) and 36 White children (M = 53 months) enrolled either in Head Start or other preschools serving low-income children participated in the study. Children were told a story using a wordless picture book about a boy looking for his frog and were asked questions about the character's thoughts. There were a total of 3 FB narrative questions. Children were also given the language and cognition subscale of the Early Screening Inventory-Revised (ESI-R; Meisels, Marsden, Wiske Stone, & Henderson, 1997).

A Race x Age ANCOVA with language score as the covariate was conducted. Language scores were used as a covariate because prior research indicates a relationship between language ability and FB performance (Astington & Jenkins, 1999). Results revealed a difference between Black (M =1.01) and White (M = .44) children's performance, F (1,71) = 5.60, p = .02. The majority of Black children (60%) answered at least one of the narrative questions correctly, whereas only 27% of the White children were able to give any correct answers.

The Black children's success on the narrative questions could be due to their cultural experience with storytelling. From the time Black children are babies they are surrounded by stories and encouraged to tell them. Their children's stories tend to be imaginative (Vernon-Feagans, 1996) and revolve around social relationships (Sperry & Sperry, 1995). When Black children were asked about other people's mental states in the context of stories, this was not difficult for them because they may have been accustomed to hearing detailed stories about people's actions and making inferences about their mental states. Perhaps Black children have a talent for narrative comprehension. If so, this talent could be incorporated into the classroom and social programs targeted at Black children.

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Early Identification of Language Impairment

Donna J. Thal

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Early identification of specific language impairment is an important problem that presents serious challenges to speech-language pathologists and educators. The major difficulty arises from the fact that early normal language development is characterized by wide variability. Given this variability, is it possible to find stable markers of clinically significant language delay? That question is addressed in this poster.

A summary of published longitudinal studies of toddlers with delayed onset and/or slow development of language will be followed by results from a longitudinal study of children who were followed from 10 to 28 months of age. At 16 months participants were divided into three groups based on vocabulary norms for the MacArthur Communicative Development Inventory (CDI; Fenson et al., 1993). Typically developing children (TD) scored above the tenth percentile on both the language comprehension and production scales. Children who were normal in comprehension but delayed in language production (LP) scored above the tenth percentile on the comprehension scale and at or below the tenth percentile on the production scale. Children who were delayed in both comprehension and production (LC) scored at or below the tenth percentile on the comprehension scale and at or below the fifteenth percentile on the production scale.

Three specific questions were addressed. The first asked whether the differences seen at 16 months were present at any of the earlier or later ages sampled. The answer was, yes, there were significant differences between the three groups on the pertinent measures at 10, 13, 20, 24, and 28 months of age. The second question was whether a single factor or combination of factors would successfully predict which children were delayed at 28 months of age. The answer to that was generally no. Using gender, ethnicity, family income, parental education, family history of language disorders or learning disabilities, use of gestures, comprehension vocabulary, and production vocabulary as predictors, models consistently predicted that all children would be normal at 28 months. Using a combination of behavioral, historical, and parent report factors as potential predictors, three factors did allow somewhat better prediction. Specifically, number of different words used in a language sample, number of words produced on the CDI, and the auditory comprehension standard score on the Preschool Language Scale-3 (Zimmerman, Steiner, & Pond, 1992) accurately predicted 94% of the children who were in the normal range and 52% of the children who were delayed at 28 months. The third question was whether rate of growth was an accurate predictor of language status at 28 months. The answer here was yes. Rate of growth in parent report of number of words understood on the CDI from 10 to 16 months of age predicted vocabulary, grammatical complexity, and mean length of longest utterance at 28 months with high reliability. In addition, children tended to remain in the same groups, and LC continued to be significantly delayed, scoring at about the fifteenth percentile at 28 months of age.

These results will be used to present a model of risk that may be used to evaluate young children for clinically significant language delay.

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Long-Term Consequences of "Baby Signs" and Their Applicability to Day Care Settings

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PRESENTER: Susan W. Goodwyn

A longitudinal study of the effects on development of a communication technique called "Baby Signs" was conducted between the years 1989 and 1997. Presented below are two recent findings that have important implications for young children, their families, and their day care providers. These are: (a) the impact of the Baby Signs experience (occurring from 11 to 24 months) on IQ measured at 8 years, and (b) the successful incorporation of Baby Signs into day care settings.

The term "Baby Signs" refers to simple physical gestures which parents or caregivers can encourage babies to treat as symbols (or "signs") for objects, events, or conditions during the period when vocal language is still very difficult. Just as babies easily learn to wave "bye-bye" and shake their head for "no" and "yes" before they can say the words, they can also learn dozens of other gesture-referent combinations. Such Baby Signs function in the same ways as early words eventually do: to label objects (e.g., arm-flapping for "bird," fingers to mouth + lip smacking for "snack"), to express needs (e.g., knob-turning gesture for "out," thumb to mouth for "drink," finger tips together for "more"), or to describe things (e.g., rubbing a hand up and down an arm for "gentle," blowing for "hot").

In 1989 a study of the effects of Baby Signs on infant development was begun with funds from the National Institutes of Health. Three groups of 11-month-old infants were assessed at 15, 19, 24, 30, and 36 months. The groups included a Baby Sign group consisting of 40 families who encouraged their infants to use this nonverbal means of communication, and two control groups who remained unaware of the Baby Sign program. The results of the study up through the 36-months test date provided evidence that the Baby Sign experience helped rather than hindered verbal and cognitive development and observations by the parents of the positive effects of Baby Signs on interactions within the family.

What is the long-term impact of early Baby Signs experience on IQ at age 8? As many children as could be located from two of the original groups, the Baby Signers (19 of 32) and the more important of the two control groups (the Nonintervention Control Group; 24 of 37), were assessed using the Wechsler Intelligence Scale for Children-Third Edition (WISC-III; Wechsler, 1991) at the end of their 2nd-grade year. Results indicated that the Baby Sign children were continuing to outperform the control children, even 6 years after the original intervention. As shown in Table 1, children who had experienced Baby Signs between 11 and 24 months scored significantly higher on Verbal IQ ($F1, 41 = 9.45, p = .0038$) and Performance IQ ($F1, 41 = 6.19, p = .017$), in addition to the overall Full Scale IQ ($F1, 41 = 12.06, p = .0012$). Further analyses revealed these differences were not due to attrition effects. No differences were found between the Baby Sign returnees and nonreturnees in the number of Baby Signs used during infancy, or between the Baby Sign and Control group returnees in Bayley MDI (Bayley, 1993) scores at 24 months and in maternal education or age. These results have exciting implications for children in general and especially for children identified for Early Head Start enrichment.

What is the impact of Baby Signs on children and caregivers in an infant care program? The infant care program at the University of California at Davis began a Baby Signs enrichment program in 1990 that continues until today. The reaction of caregivers, babies, and parents has been uniformly positive. Many of the benefits reported by the staff mirror those experienced by the families involved in the laboratory studies: much lower frustration levels, increased caregiver-child interaction, and feelings of efficacy on the part of the toddlers. Others are more specific to the day care setting. These include: (a) increased parent-staff communication and cooperation, (b) positive effects on parent-infant interaction outside the day care setting, (c) more effective care giving even by caregivers who do not know the children well, (d) use of Baby Signs by the infants to regulate their own emotions, and (e) occasional communication between children using Baby Signs. Specific strategies used by staff to introduce Baby Signs to parents and incorporate them into daily routines at the center include: (a) Baby Sign workshops for parents, (b) Baby Sign pictures on Center walls, (c) Baby Sign songs during circle time, (d) Baby Sign progress reports, and (e) Baby Sign Newsletter.

Table 1.
Mean IQ Scores (and Percentile Ranks) for Baby Signers and Control Children at Post 2nd- Grade Testing

GROUP	FULL IQ	VERBAL IQ	PERFORMANCE IQ
BS ($N = 19$)	114 (75%)	116 (75%)	109 (70%)
CC ($N = 24$)	102 (53%)	103 (55%)	101 (52%)

Note. All scores based on the WISC-III Intelligence Test

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The Language Performance of African American Head Start Children on the Preschool Language Scale-3

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PRESENTER: Cathy Huaqing Qi

The nonbiased assessment of children from diverse cultural backgrounds has attracted increasing attention from researchers over the years (Washington & Craig, 1999). However, there have been limited studies exploring culturally valid language measures for use with low-income, African American children (Cole & Taylor, 1990). This issue has been important because it has been argued that disproportionately large numbers of children from diverse cultural backgrounds are placed in special education services (Fagundes, Haynes, Haak, & Moran, 1998).

The purpose of the study was: (a) to examine the language performance of African American preschool children when given the Preschool Language Scale-3 (PLS-3; Zimmerman, Steiner, & Pond, 1992), and (b) to identify the possibility of cultural bias. The present study was part of a large project focusing on early identification of and intervention with children at risk for development of language delays and behavioral problems (Hester & Kaiser, 1998). The PLS-3 was administered to 279 African American children. The mean age of the children in the sample was 44 months.

The PLS-3 is a standardized test designed for use with children from birth through 6 years of age. The test assesses young children's receptive and expressive language abilities. In our study, two additional language tests were administered as concurrent validity: the Peabody Picture Vocabulary Test (PPVT-III; Dunn & Dunn, 1997) and the Expressive Vocabulary Test (EVT; William, 1997).

A licensed psychologist trained a team of nine undergraduates, graduate students, and research staff with backgrounds in special education and speech pathology to administer the tests. Interrater reliability observations were conducted for all testers, and a reliability score of 98% agreement was obtained.

Table 1 shows the mean scores and standard deviation (SD) for the PLS-3, PPVT-III, and EVT for the sample. The average score for this sample ($M = 86.9$, $SD = 12.3$) was nearly one SD below the standardized sample ($M = 100$, $SD = 15$). Boys' scores were significantly lower than girls' scores on both subscales.

Table 1.
The PLS-3 Standard Score Means and Standard Deviations by Gender

		Auditory			Expressive		
	N	M	SD	test value	M	SD	test value
Gender							
Male	145	84.86	11.03		85.75	10.87	
Female	134	89.21	14.12		90.15	12.53	
..				$t = 2.87^*$			$t = 3.13^*$

Note. $^*p < .01$

Item-by-item analysis showed the significant variability in item performance within the subsamples. It suggested that the PLS-3 items did discriminate differential abilities. Children's performance on the PLS-3 was correlated with their performance on the PPVT-III and the EVT. The result supported the idea that these tests reflect related but not identical content domains.

Our findings suggested that the PLS-3 is an appropriate test for use with low-income African American children with some specific cautions. Further studies need to be done to explore the predictive validity of various cutoff points in identifying African American children with language disorders. Multiple assessments of language performance are likely to be necessary to determine which language tests are suitable for early intervention with low-income African American children.

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The Relationship Between Maternal Communicative Functions and Child Language Development in Low-Income Families

Joanne Roberts, Becky Gonzalez, Tracy Poon, Elizabeth Spier, Catherine Tamis-LeMonda

PRESENTERS: Joanne Roberts, Elizabeth Spier, Tracy Poon, Catherine Tamis-LeMonda, Mark Spellmann

An investigation of the relationship between maternal language usage and child language in 75 low-income, ethnically diverse mother infant dyads was presented. Children were on average, 14 months of age. Maternal language and gestures were coded into 21 communicative categories. Results indicate significant relations between maternal communication and child language.

(Abstract from program; poster summary not available for publication.)

Mother-Child Conversation During Toy Play as a Source of Early Literacy Skills

Jane R. Katz , Patton O. Tabors

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This research explored relationships between features of mother-child conversations during toy play and children's literacy skill in kindergarten. The exploration was based on the oral language model of early literacy development proposed by Snow (1991), which demonstrates links between social interaction and young children's oral language skills, and subsequently between oral language skills and literacy skills. The two categories of oral language skill highlighted here are decontextualized language (that is, language in which meaning is communicated between speakers with minimal reliance on shared information, shared prior understanding, or shared context; Snow & Dickinson, 1991) and vocabulary (Anderson & Freebody, 1981).

Data used for this analysis came from a longitudinal study of children's early language and literacy development (Snow, Dickinson, & Tabors, 1989). The sample consisted of children from 52 low-income families, 25% of whom were of a racial/ethnic minority. Fifty-six percent of the children attended Head Start. The language data were mother-child conversations audiotaped during 10-15 minute toy play sessions at home visits when the children were 3, 4, and 5 years old. Outcome measures for this analysis came from a battery of tests administered to the children in kindergarten (Snow, Tabors, Nicholson, & Kurland, 1995), including the Peabody Picture Vocabulary Test-R (Dunn & Dunn, 1981) and tests of emergent literacy (Mason & Stewart, 1989), definitional skill, and narrative production. Background characteristics of the children and families controlled for in this analysis included family income level and mother's level of education at the study's inception, and the children's gender, ethnic/racial minority status, and mean length of utterance (representing productive language skill) at age 3.

One set of predictors, indexing decontextualized language, is mothers' use of fantasy talk during the play sessions. These variables were constructed through an utterance-by-utterance coding of the toy play conversations, distinguishing between fantasy play talk, nonfantasy play talk, and talk that was unrelated to the play. The percentage of fantasy talk used by mothers at each home play session was calculated as the ratio of pretend utterances to mothers' total utterances. A second set of predictors, indexing complex vocabulary, is mothers' rare word use. Using mothers' total word output in the play sessions, rare words were designated by excluding common words (as determined by Chall and Dale; 1995), proper nouns, exclamations, forms of address, child culture forms, and incorrect forms. A rare word density measure of each mothers' talk was calculated as a ratio of rare words to her total word output during toy play, multiplied by 1,000.

Regression analyses demonstrate that mother-child play with toys at home in the preschool years is a productive setting for children's language learning that relates to later literacy skills. This analysis highlights an everyday activity in the home as a favorable context for children's language growth, and expands the home contexts into which rich linguistic input related to later literacy skills may be introduced.

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The Influences of Television and Book Reading on Low-Income Children's Emerging Narrative Ability

Margaret S. Benson

PRESENTER: Margaret S. Benson

This study examined the influence on low-income children's story production of two variables: (a) the frequency with which the child was read to at home, and (b) the number of hours of television viewing reported for the child. Two concerns are often expressed with regard to low-income children: the first is that they are not read to often enough at home, and the second is that these children watch too much television. Shared book reading has emerged in recent years as the family literacy practice that best predicts emerging literacy (Wells, 1985). In middle class families children are read to beginning in infancy, and the nightly bedtime story is a ritual (Heath, 1982). Television viewing is considered problematic. Watching a lot of television is associated with increased aggression and poor performance in school. But a review of the literature suggests a more complicated association between television viewing and reading achievement. Reinking and Wu (1990) found several studies in which reading ability increased as television-viewing time went up, and only decreased as television viewing time became extensive.

The participants were 19 children and their mothers. The children were all attending a Head Start program in a small city in central Pennsylvania. They ranged in age from 51 months, to 65 months. All but one family was Euro American. Each child was asked to produce a story, using as a stimulus a wordless storybook designed for a research project by Shapiro and Hudson (1989). Transcripts of the story were analyzed for narrative structure. Mothers were interviewed separately and asked to fill out a questionnaire that dealt with how often the child was read to by the mother or by other family members, how many hours of television the child typically watched in a day, and what programs were watched.

The children in this study were not read to often. Of the 19 participants, 11 were read fewer than one story a day, and only 6 were read to more than 10 times a week. In contrast, 10 of the 19 subjects watched more than 3 hours of television daily; only one subject watched no more than 2 hours a day. Their mothers reported that they were watching such shows as "The Simpsons," and "The Teen-Age Mutant Ninja Turtles."

Prediction analysis (von Eye & Brandtstadter, 1988) revealed that contrary to expectations, the child's narrative ability was not predicted by how frequently the child was read to. The prediction that the less the child was read to, the better the story produced, was a better fit to the data. The prediction that watching a lot of television would be associated with poor narrative skill was not supported. Configural analysis (von Eye, 1990) indicated that when these two variables were cross classified, the cell representing children who both watched 3 or more hours of television and told the best stories had significantly more observations than expected.

More research was called for, and implications for practitioners were discussed.

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Individual Differences in Early Learning Contexts for Spanish- and English-Speaking Children

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This study examined characteristics of bilingual learning environments as predictors of vocabulary outcomes in young English- and Spanish-speaking children. Participants were 122 toddlers ($M = 24$ months, range = 17-30; $n = 60$ females, 62 males) who were regularly exposed to both English and Spanish (at least 12 hours per week) and who had not experienced birth complications, hearing loss, extended hospitalizations, or diagnosed disabilities. Families were primarily Latino (76%), from middle- to lower-middle socioeconomic groups (53% of fathers had some college, working primarily in skilled or semiskilled occupations).

Spanish was the home language in 43% of the households, and 43% of the families used both languages regularly. Based on a detailed interview, the relative proportion of total hours of English to Spanish spoken to the child was $M = 59\%$ Spanish, 41% English; however, estimates ranged from 8.4% English (91.6% Spanish) to 92.0% English (8% Spanish). Examination of learning environments indicated that some children are exposed to a consistent source, for example, mother only speaks English "pure," whereas, other children may hear English consistently from one individual (e.g., a grandmother) while other family members speak Spanish "mixed." Still other children hear both languages interchangeably during a single conversation or sentence, for example, "code switch." Children were classified according to the proportion of total English input that consisted of primarily "pure" ($n = 22$) versus "mixed" ($n = 39$) versus "code-switch" ($n = 61$) input. Vocabulary acquisition was assessed using the MacArthur Communicative Development Inventory: Words and Sentences (Fenson, et al., 1994) and the Inventario del Desarrollo de Habilidades Comunicativas: Palabras y Enunciados (Jackson-Maldonado, Thal, Marchman, Bates, & Gutierrez-Clellen, 1993). Children scored below age- and gender-based expectations in reported number of words produced compared to monolinguals (English $M = 122.7$, 19th percentile; Spanish $M = 143.1$, 31st percentile). However, using a composite measure (total "concepts" produced; Pearson, Fernandez, & Oller, 1993), children performed at a level that was typical of their monolingual peers ($M = 222$, 51st percentile). Size of reported English vocabulary was correlated with hours per week of English exposure ($r122 = .48$, $p < .001$), even after mother's years of education was factored out ($r119 = .45$, $p < .001$). In addition, children who hear English primarily in code-switching contexts may be at a disadvantage ($M = 12$th percentile) compared to children from more language-consistent environments ($M = 28$th percentile, $p < .05$). Type of language learning context makes a small, but significant impact over and above amount of English exposure (r-squared change = 2.8%, $p < .05$).

These findings indicate that young English- and Spanish-exposed children can demonstrate progress in vocabulary development that is comparable to their monolingual peers. Further, children from a variety of learning contexts can make substantive gains in vocabulary acquisition, with both quality and quantity of input playing a role in these early stages. Future studies will assess the degree to which individual differences in learning contexts impact the acquisition of other aspects of Spanish and English language acquisition (e.g., morphology).

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Phonological Production in Bilingual (Spanish-English) Children

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It is estimated that phonological disorders affect 10%-15% of preschoolers (Matthews & Frattali, 1990). There is evidence that the phonological system of bilingual speakers develops differently from that of monolingual speakers (e.g., Gildersleeve, Davis, & Stubbe, 1996). There is more information on the phonological skills of monolingual English-speaking children (e.g., Smit, 1993) and monolingual Spanish-speaking children (e.g., Goldstein & Iglesias, 1996) than on bilingual children. Gildersleeve et al. found that typically developing, bilingual children showed an overall lower intelligibility rating and made more sound errors overall than their monolingual English peers. The subjects studied by Gildersleeve et al. were all younger than 4 years, were only assessed in English, and were all typically developing. The purpose of this study was to characterize the phonological patterns in 4- to 6-year-old bilingual (Spanish-English) children with and without phonological disorders.

Six typically developing, bilingual (Spanish-English) children and six bilingual children with phonological disorders between the ages of 4 and 6 participated as subjects. The children's use of both languages was determined by their parents and one of their classroom teachers. All typically developing children passed a speech-language-hearing screening; all the children with phonological disorders failed the screening. A single-word phonological assessment was used to assess the children in both Spanish and English. Interjudge reliability of transcription was 94% for English and 95% for Spanish. Intrajudge reliability of transcription was 98% for English and 98% for Spanish. Analyses in both languages included number of consonant errors, percent consonants correct, number of vowel errors, percent vowels correct, and use of phonological processes.

The results show that typically developing children make far fewer consonant errors in both English and Spanish than children with phonological disorders. Thus, the percentage of consonants produced correctly is over 90% for typically developing children and less than 90% for children with phonological disorders regardless of language tested. The overall results indicate that children with phonological disorders show higher percentages of occurrences on phonological processes than typically developing children regardless of age. The results also indicate that the percentage of vowels produced correctly is almost 100% for both groups of children regardless of language tested.

In comparison to monolingual Spanish-speaking children (e.g., Goldstein & Iglesias, 1996), monolingual English-speaking children (e.g., Smit, 1993), and bilingual (Spanish-English) children (e.g., Gildersleeve, et al., 1996), the results indicate that the phonological systems of bilingual children are different from that of monolingual children of either language. That is, bilingual children show error types that are not exhibited in monolingual children (e.g., pronouncing "th" as in "though" as "l") or are exhibited rarely (e.g., pronouncing "d" as "n"). The results also indicate that typically developing bilingual children exhibit fewer errors than bilingual children with phonological disorders. In addition, bilingual children with phonological disorders show error types that are not used by typically developing bilingual children (e.g., final consonant deletion and fronting). Given that many children enrolled in Head Start centers in the United States are bilingual, these data can aid in the appropriate identification of children with phonological disorders by speech-language pathologists, Head Start personnel, and parents.

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Quality Early Childhood Education: Second Languages Acquisition and Developmentally Appropriate Practices

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PRESENTER: Mary DeBey

There are windows of opportunity when a young child's brain is capable of learning more efficiently and thoroughly. Before or after the critical period, a child can still learn a particular skill, however, most children do not master the skill with the same ease or competence. Children have a natural ability to learn language and the biological makeup to learn several languages. The "window of opportunity" to acquire a second language naturally is open from birth to the age of 5 or 6. Children older than 5 or 10 are able to acquire a second language, however, the chance of achieving native-like pronunciation is less likely.

Learning a second language in early childhood utilizes both the right and left hemispheres of the brain. New pathways in the brain are formed by learning a second language and then strengthened through repetition and exposure. Cognitively a bilingual child will be more creative and will have the ability to think more analytically (Marcos, 1998). Bilingual children read faster than monolingual children because they are capable of recognizing words more readily than monolingual children. Overall, a bilingual's academic skills will be stronger (Bialystok, 1997). By the age of 4, bilingual children progress more than monolingual children in understanding general properties of the symbolic function of the written language. By 5, they are more advanced in understanding specific representation properties than children learning only one written system (Bialystok). In addition, learning a second language presents an excellent opportunity to introduce young children to a different culture.

The goal of second language acquisition is bilingual fluency, which is the ability to produce complete and meaningful utterances in two languages. A quality early childhood program, using developmentally appropriate practices, is the key to establishing a quality second language acquisition program within a group setting. Learning a second language should be similar to how we learn the first language. Children are more likely to develop competency, fluency, and creativity in language experiences when they are deeply involved in their second language through play. There are several program models used for second language education including enrichment, second language immersion, dual immersion, and dual language. Dual language and dual immersion programs appear to be the most effective for young children (Garro, 1999).

Understanding the benefits of early second language acquisition calls upon quality early childhood programs to consider the implementation of second language programs. Implementing a successful program requires a commitment to a second language, the commitment of the staff, and the involvement of the parents.

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Teachers' Beliefs and Practices Related to Second Language Learning in Head Start Classrooms

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Researchers have shown the connection between teachers' theoretical beliefs and their educational practices (Mayer, 1985; Pajares, 1992). Specifically, researchers have shown that early childhood educators who work with children who are learning English as a second language are sometimes guided by professional training, but more commonly draw upon their own experiences and beliefs regarding second language learning when developing their teaching practice (Allen, 1991; Johnson, 1992).

This study was designed to investigate: (a) how Head Start teachers' beliefs about second language learning are related to their teaching practices, (b) how Head Start teachers' reported beliefs and practices are related to background factors, and (c) how much of the variation in Head Start teachers' reported practices is explained by their beliefs when controlling for their background.

Data for this study on teachers' beliefs about second language learning and their related practices were collected through a Language and Culture Questionnaire developed by the Harvard Language Diversity Project. The Language and Culture Questionnaire consists of two parts. In the first part, teachers are asked to respond to statements regarding the process of second language acquisition and factors that influence the process. In the second part, teachers are asked about their classroom practices related to second language learners. Statistical analyses of the questionnaire revealed internal consistency for the items corresponding to beliefs and practices, demonstrating no evidence for item deletion (Chronbach's Alpha reliability coefficients were .62 and .81, respectively).

The questionnaire was administered to 76 Head Start lead and assistant teachers during the 1997-1998 school year as part of a larger data collection process carried out by the New England Quality Research Center. The teachers' ethnic backgrounds were diverse: 64% White, 21.3% Latino, 6.7% Asian, 5.3% African American, and 2.7% Other. The majority of the teachers in the sample had a high school diploma, GED, CDA, or associates degree (73.3%). Teachers' years working in Head Start ranged from 0 to 23 with an average of 6 years.

Our hypothesis was that teachers' theories of how children learn second languages inform how teachers develop the pedagogy that underlies their practices; thus, we expected to find a positive significant relationship between beliefs and practices. To examine this hypothesis we analyzed the data using correlation and regression analyses. Teachers' beliefs were, in fact, found to be positively related to reported practices ($r = .39$, $p < .001$). Background variables including teachers' years in Head Start, years in current position, educational level, and ethnicity were not related to either beliefs or practices as measured by our instruments. Regression analyses revealed that teachers' beliefs explained 9.7% of the variation in reported practices when controlling for teachers' background.

Research in second language acquisition has shown that some practices are more effective than others for facilitating children's second language learning (August & Hakuta, 1997; Tabors, 1997). Given the connection between beliefs and practices, the results of this study suggest that staff development efforts should be directed to helping teachers improve their practice by supporting the integration of information on second language acquisition with currently held beliefs.

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Analysis of Low-Income Families' Level of Acculturation, Parent-Child Interactions, and Their Children's Language Outcomes in English and Spanish.

Judith R. Guerrero

PRESENTER: Judith R. Guerrero

Numerous children in the United States are growing up in bilingual-bicultural environments. Many of them are simultaneously acquiring more than one language and culture by experiencing different linguistic and cultural contexts during their first 3 years of life. This poster reports data on the language outcomes and parent-child interactions of 30 Mexican American children participating in a larger investigation of Early Head Start. Specifically, mothers' level of acculturation was examined as a factor influencing parent-child linguistic interactions and child language outcomes in both English and Spanish.

Three major instruments were used to collect the data. First, the Acculturation Rating Scale for Mexican Americans-II (ARSMA-II; Cuellar, Arnold, & Maldonado, 1995) was used to assess the degree of acculturation of the children's mothers. ARSMA-II consists of 30 multiple choice questions on subjects such as language familiarity and usage, ethnic interaction, ethnic pride and identity, cultural heritage, and generational proximity. Second, the quality of parent-child interaction in English and Spanish in the home was assessed at 8 and 14, 18 and 24, and 30 and 36 months using the Code for Interactive Recording of Caregiving and Learning Environments (CIRCLE-II; Atwater, Montagne, Creighton, Williams, & Hou, 1993). CIRCLE-II is a naturalistic observation system that uses a momentary time-sampling system to record information about the caregiving environment and the quality of parent-child interactions. Third, the Preschool Language Scale-III (PLS-III; Zimmerman, Steiner, & Pond, 1992a) and the Spanish adaptation la Escala Prescolar del Lenguaje (PLS-III; Zimmerman, Steiner, & Pond, 1992b) were used to assess language outcomes on expressive skills at 24 and 36 months.

As expected, the descriptive analysis demonstrated differences in the mean percentages of children's language outcomes and parent-child linguistic interactions in English and Spanish across the three levels of acculturation. The first three levels in a five-level continuum were represented in this sample: Level 1 = Very Mexican oriented, Level 2 = Mexican oriented to approximately balanced bilingual, and Level 3 = slightly Anglo oriented bicultural. Children whose families were more highly acculturated were more likely to be spoken to in English (as measured by the CIRCLE-II) and have higher language outcomes in English (as measured by the PLS-III) at 36 months.

Assessing parent-child interactions in bicultural-bilingual environments is a difficult and complex task that has been under represented in the current research. This topic is critical to researchers to understand the extend to which the mothers' adaptation to a new culture influence their children's expressive language outcomes in English and Spanish and parent-child interactions. These findings are limited due to small sample size diminishing the power for some analyses. Nonetheless, the results establish a basis for further research in the relationship of mothers' acculturation level, children's language outcomes, and parent-child interactions in English and Spanish when children are very young.

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A Varied Social Experience for Children With Diverse Language and Ability

Leslie J. Couse, Mellisa A. Clawson

PRESENTER: Leslie J. Couse

Early childhood classrooms are becoming increasingly diverse. This reflects the cultural and ethnic shift in the population of the United States (Gonzalez-Mena, 1997) as well as the movement toward inclusive classrooms where children with disabilities are educated in the same classroom with their age appropriate typical peers (Sage & Burrello, 1994).

Language is viewed as essential to the development of children's social and communicative skills (Hanson, Gutierrez, Morgan, Brennan, & Zercher, 1997). Language development serves as a marker of typical development and is a vehicle for developing social skills in the preschool setting. Children for whom English is a Second Language (ESL) may be at risk for never fully learning either language (Barrera, 1993; Hanson et al.; NAEYC, 1996). Disabilities may be language related, resulting in problems with expressive and / or receptive language. These language deficits can lead to problems with the development of social competence for children (Guralnick, Connor, Hammond, Gottman, & Kinnish, 1996). The diversity of the classroom is increased in inclusive preschool settings.

Current research is limited that addresses the interaction of disability and variation in language between home and school (Hanson et al., 1997) with child outcomes. Previous research indicates that characteristics of the early childhood language environment, specifically teacher language, are an important influence on the social, cognitive, and linguistic development of children (McCartney, 1984; Phillips, McCartney, & Scarr, 1987). It remains unclear whether the language environments provided to children with disabilities, or who are ESL, are similar to those of their typically developing peers. The purpose of this study was to examine the teacher language in preschool classrooms representing a high level of diversity and children's social behavior.

Subjects were 91 children (43 girls) age 24 to 61 months ($M = 42$) attending an inclusive university-based preschool. Thirteen percent ($n = 12$) of the children received in-school services for a diagnosed disability. Fifteen percent ($n = 14$) of the children were designated as ESL, based upon parent report. There were no children who were both ESL and had a disability.

Data were collected during classroom observations. The rate of teacher-child interaction was calculated and content of teacher interaction was coded to reflect the dominant theme from a modified Innes, Banspach, and Woodman (1982) scale: caregiving, instruction, conversation, social facilitation, play, and control. Teacher's affective tone was coded as positive, negative, or neutral. Child response was coded as ignore, negative, positive, or passive. A series of one-way analyses of variance were run to examine differences in the language experiences of ESL versus English speaking children and for children with, versus those without, disabilities.

Results indicated that teachers had significantly fewer ($r < .03$) transactional interactions with ESL children than with English speaking children. Teachers had significantly fewer ($r < .01$) expressive interactions with ESL children ($M = 1.79$) than with English ($M = 20.88$) only speaking children. Teachers used significantly less positive affect ($r < .03$) when interacting with ESL children ($M = 5.23$) as compared with English speaking ($M = 40.70$) children. ESL children ($M = 3.51$) gave significantly fewer ($r < .025$) positive child responses than English ($M = 30.57$) speaking children.

The presence of a disability had an effect upon the type of interaction between teachers and children. Teachers had significantly fewer ($r < .03$) one-way interactions with children with disabilities. Children with disabilities ($M = 1.18$) ignored significantly fewer ($r < .02$) initiations than children without disabilities ($M = 5.32$).

This study found experiences were different for children based upon their native language and the presence of a disability. Children with disabilities had few differences in their language experience. Formal supports and teacher training appeared to compensate for limited language when a disability was present, however, that did not happen for ESL children. This may be a result of supports that are present for children with disabilities in the form of laws (PL99-457), funding, IEPs, special educators, and therapists. Formal teacher training and awareness are greater for working with children with disabilities.

The role of language is central to the successful inclusion of diverse groups of children. Therefore, a need exists for enhanced teacher training and support for working with ESL children. These findings provide a basis for further study of the impact of language and disability upon the educational experience of young children.

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Teachers' Use of Reflective Practice to Examine Emergent Literacy Practices

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Due to the convergence of several factors, the importance of young children's emergent literacy has received increased interest (International Reading Association; IRA & NAEYC, 1998). The reauthorization of Head Start stated that children enrolled in the program need to at least develop phonemic and print awareness. Much has been written on how children acquire concepts of print (e.g., Dyson, 1986; Sulzby, 1985) and the strategies that teachers can take to enhance literacy development (Morrow, 1993). However, less is known regarding how early childhood teachers understand their role in children's emergent writing. The purpose of this project was to examine, through a qualitative study, early childhood educators' perceptions of children's writing and drawing.

Participants in the study were the teachers in two preschool classrooms at a campus child development lab school. The staff had established a period, 2 to 3 times a week where the children were expected to draw for 5 to 8 minutes. This practice was introduced as a way to encourage children to use writing implements such as markers, pens, pencils, and crayons. During this period, teachers might offer suggestions for the child to draw, but more often the choice of what to draw was left to the child. As they finished, children would dictate, and a teacher would write descriptive phases on the drawing if desired by the child.

The methods used to obtain information regarding writing and drawing practice included interviews, documentation, and field notes of classroom activities and teachers' professional planning meetings. These types of information were collected for 10 weeks. All full-time staff members ($n = 10$) were interviewed about their perceptions of the activity.

Based on the teacher interviews and classroom field notes, the following issues emerged. First, teachers seem to struggle with their intentions for the activity. On one hand, teachers wanted to help "prepare children for kindergarten," but seemed not to want to engage in direct instruction. The teachers wanted the children to enjoy the activity and learn from it, but were unsure about how best to facilitate children's interest and engagement. While the teachers seemed to accept the practice of providing direction about how to help children achieve in the domains of self-help or social skills, they expressed reluctance to be directive in something they viewed as in the cognitive domain. This ongoing theme, regarding the role of the teacher in supporting the children in process, but not directing the product of the work was seen throughout the interviews. A second issue that has emerged from the observations and interviews pointed to teachers' recognition of management issues. Some children seemed to prefer working alone, while some wanted to work with others. Teachers recognized that small groups of children working together presented the advantage of allowing children to exchange ideas about each other's work. Yet, the teachers indicated that they struggled with finding the time to engage each child in meaningful dialogue about his or her work. This type of information will provide insight into how all early childhood teachers can encourage children's emergent literacy.

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Reading Achievement When Young Children Live in Poverty

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Little is known about the early development of reading in very young children from low-income families. Research in this area is critical for understanding individual differences in reading development and for designing effective prevention and intervention procedures for this high-risk group. The purpose in this study was to determine how individual differences in knowledge of print concepts, receptive oral vocabulary, and phonological awareness are related to individual differences in early reading achievement for children living in poverty.

A total of 439 children (preschoolers, kindergartners, 1st- and 2nd-graders) and one parent for each child (90% were mothers), all from very low-income families took part. Most (57%) of the parents reported that they were married, 35% of mothers and 46% of fathers had not completed high school, and most parents had not worked in the previous year. Children's reading achievement was measured on the letter-word identification subtest of the Woodcock-Johnson Psycho-Educational Battery (Woodcock & Johnson, 1989-1990); their knowledge of print concepts on the Sand version of the Concepts About Print Test (Clay, 1979), normed in advance for use in this study; their receptive oral vocabulary on the Peabody Picture Vocabulary Test-Revised (Dunn & Dunn, 1981); and their phonological awareness on a modified version of Liberman's Syllable (preschoolers) or Phoneme (Kindergarten, Grades 1 and 2) Segmentation Task (Liberman, Shankweiler, Fischer, & Carter, 1974), normed in advance for this study. Children were tested individually.

Children's individual scores on the reading achievement, knowledge of print concepts, oral vocabulary, and phonemic segmentation measures ranged from the 1st- to the 99th-percentile, but the mean score on each measure was significantly below the national average. There were no significant differences (analyses of variance) on any of the measures between older and younger children, boys versus girls, or urban versus rural children. The relations between children's vocabulary, print awareness, phonological processing, and reading achievement were determined (regression analyses within grade). Individual differences in reading achievement were reliably associated with individual differences in knowledge of print conventions, accounting for between 30%-40% of the variance at each grade. None of the other variables predicted reading achievement.

The findings are straightforward. Prior to school entry, and during the first 3 years of formal schooling, children in poverty are performing well below the national average on tests of reading achievement. They also demonstrate levels of reading related knowledge and phonological processing skills that are significantly below the population mean. Approximately 30% of the children read reasonably well, but most enter school with insufficient knowledge and skill important for early reading development. Individual differences in reading were powerfully predicted by knowledge of print concepts, which is associated with exposure to print and books.

A comprehensive approach to reading, with a particular focus on knowledge of print concepts, should be the focus of pre and early reading programs for children at risk due to poverty. Most preschool programs do not include the quality and intensity of prereading programming necessary to make a difference for children in poverty. Similarly, most schools fail to provide an adequate program of instruction in reading.

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Long Term Effects of Early Intervention

The Effects of Prekindergarten Participation on 4th-Grade Achievement

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Since the inception of Head Start, federal and state programs serving economically disadvantaged 4-year-olds have consistently been challenged to demonstrate that early education leads to satisfactory academic performance in elementary school. For example, two recent General Accounting Office reports (1997, 1998) concluded that Head Start research to date has not systematically evaluated the program's long-term impact on children's cognitive skills. When the state of Florida passed its Prevention, Early Assistance, and Early Childhood Act in 1989 authorizing a prekindergarten early intervention (PKEI) program for low-income 4-year-olds, it built into statute an ongoing, third party evaluation of program effectiveness. This paper summarizes the findings from the fourth in a series of annual reports prepared by an independent evaluation contractor.

The study assessed the effects of participating in Florida's Prekindergarten Early Intervention Program (PKEI) on 4th-grade math and reading standardized norm referenced test (NRT) scores and incidence of retention. PKEI serves mostly 4-year-old children from families whose income falls below the federal poverty level. Study subjects were all children who started kindergarten in 1993-94 and remained in Florida's public schools for the following 4 years. ($N = 75{,}025$). Results of a logistic regression analysis indicated that African American, Latino, and female students who had participated in PKEI had significantly higher odds of being in the highest test score outcome category for both math and reading, relative to their counterparts who had not been in PKEI. These same groups of PKEI participants had significantly lower odds of being excluded from taking the test (on the grounds of being assigned to exceptional student education) and of being retained. PKEI participation did not appear to benefit low-income White students or males. If the analysis had been restricted to just children who took 4th-grade NRTs, the true effect of PKEI would have been masked. The success of PKEI was manifested in the higher percentage of children reaching 4th grade on time, that is, without ever having been retained.

This absence of retention indicates a greater level of academic success of PKEI participants in elementary school. It also emphasizes that scores on NRTs should not be the sole measure of achievement when comparing the performance of programs, schools, counties, or states. The percentage of the initial kindergarten cohort taking the test is also important. If the proportion of students excluded from testing is not reported in some fashion alongside test scores, then an incomplete and potentially misleading picture of success may result. It should be noted, however, that a fully accurate estimate of the effect of PKEI participation might not have been observed because children categorized as not in PKEI potentially could have been participants in other federally funded intervention programs such as Head Start and Even Start. Thus, the nonparticipant comparison group in this study was probably contaminated by children who had, in fact, benefited from other interventions, thus reducing the measured effect of PKEI.

Possibly a larger effect would have been observed if a true no-treatment group had been available for comparison.

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Resilience and Reading Proficiency of Head Start Graduates in Inner-City Schools

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Eighty Head Start graduates in grades 3-12 were selected for a study comparing aspects of school behavior with family attributes, parenting, and peer relations to ascertain how strongly they may be associated with (and potentially causally contribute to) reading excellence and psychological resilience.

Excellent reading proficiency was correlated with high child and maternal intelligence, maternal education, and social class. Maternal intelligence was more closely associated with grade performance than was the children's *own* intelligence. Proficient readers had a favorable self-concept in all domains *except* social relations. These students achieved superior grade performance and received higher teacher ratings of academic competence and classroom behaviors such as confidence, group participation, and independence. Mother's intelligence was also positively associated with teacher ratings of their children's confidence and independence, and with children's reports of homework engagement, cooperation at school, and lack of antisocial contacts with peers. Children's measured intelligence (WAIS Information and Block Design subtests; Wechsler, 1997) correlated with only one teacher-rated trait: independence.

GPA was correlated with teacher ratings of the following classroom behaviors: orderliness, cooperation, achievement, popularity, work habits, good conduct, motivation, reliability, peacefulness (i.e., not aggressiveness), and good adjustment. Favorable self-concepts in the scholastic and behavioral domains were pervasively correlated with teacher ratings of extraverted behavior, high activity level, leadership, and pleasant disposition.

Generous psychological autonomy granting by parents,—as judged by both parents and children—was favorably related to reading proficiency, GPA, and every aspect of children's self-esteem except social relations. It was also positively correlated with maternal IQ. Self-reported parental authoritarianism was *inversely* correlated with GPA. Self-reported parental involvement at school was positively associated with parental social class. Child ratings of parental involvement in scholastic matters were strongly correlated with parental assessments of the same thing, and with parental claims of lax control and generous autonomy granting, as well as children's positive self-concepts in social relations and behavioral conformity. Favorable home environment, characterized by authoritative parenting, lack of authoritarianism, active parental involvement in school affairs, and acceptance of the child, was positively correlated with teacher-rated cheerfulness in the child, high achievement, calm demeanor at school, and generalized emotional stability.

Good readers made more favorable ratings of their friends' dedication to homework and cooperation, but there was no relation to antisocial contacts or to the academic competence of their friends. Teachers provided more favorable ratings of the best friends on classroom engagement and dedication to homework, corroborating the index children's judgments, but also gave more favorable ratings for academic competence and lack of antisocial connections; however, there was relatively little correlation between the teacher ratings and the index children's ratings on those measures.

We were impressed that parenting and attributes of family background were so strongly associated with scholastic performance and behavior in the classroom. In many cases, those associations were stronger than those with the child's own measured intelligence. Objectively measured reading skills seemed to be reflected in the classroom primarily by constructively assertive behaviors, which were distinctively recognized by the teachers, but conforming behaviors that reflected pleasant personality, emotional control, and good adjustment seemed to elicit the most personal endorsements from the teachers. These results underline the importance of peer relations, family background, and parental support for the education and psychological resilience of disadvantaged children.

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Longitudinal Outcomes of Head Start Children: Examining Predictors of Gender-Based Differences

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The Head Start Success Study (which was funded as a Head Start Correlates Study by the Administration for Children, Youth, and Families) was designed both to provide information on longitudinal outcomes and to identify factors that predict positive and negative outcomes within a Head Start sample. The Head Start Success Study was a longitudinal, nonexperimental project designed to determine how Head Start intervention may be strengthened to meet the needs of the children and families being served by Head Start. Over a 5-year period, this study followed 248 Head Start children and their families enrolled in three cohorts across successive years, through 1st grade and into 3rd grade (for the first cohort).

Measures for this study included a wide variety of questionnaires and standardized individual instruments. Correlational and multiple regression analyses focused on identifying those factors predictive of positive outcomes were presented. All information was presented by gender as gender-based differential outcomes have been identified.

Analyses were conducted to examine longitudinal changes in a variety of outcome areas. Boys significantly improved in their cognitive and academic skills, as noted by their change in percentile scores over time, which was measured by the Woodcock-Johnson Psycho-Educational Assessment Battery (Woodcock & Johnson, 1989), when compared to girls. Boys moved from the 34th percentile in cognitive skills at the end of Head Start year to the 44th percentile in 1st grade, to the 54th in 3rd grade. Academic skills increased from the 18th percentile at the end of the Head Start year to the 45th percentile in 3rd grade. For girls, cognitive skills went from the 41st percentile to the 32nd, and academic skill from 25th to 22nd over the same time period.

Correlations among entry variables and outcomes were conducted. Although all variables cannot be discussed, some of the salient correlations include: (a) There is a strong relationship between child entry characteristics and outcomes, both in cognitive/academic-type skills and personality variables; (b) Family variables did not correlate with cognitive/academic outcomes, but did with social skills outcomes; (c) Maternal factors, education, and intelligence correlate with cognitive/academic outcome. Parental involvement also correlates with cognitive/academic outcomes. Aspects of the home environment did correlate with cognitive/academic outcomes, but other environmental variables (Head Start classroom, neighborhood) did not.

The information from this analysis is summarized below:

1. Gender based longitudinal differences were found in cognitive and academic skills. Boys performed better than girls.
2. At 1st grade this difference was approximately one fourth of an effect size (4 points on the

test), but approximately one half an effect size (8 points) by 3rd grade. It is unknown if this would continue. The small size of the 3rd grade cohort was a limitation.

3. The issue of looking at static sores versus change over time is important. The variables that predict an outcome at a point in time are similar for boys and girls, but variables that predict change over time are very different for girls than for boys. This speaks to the need for more sophisticated analyses (e.g., growth curve analysis).
4. Girls' longitudinal cognitive and academic skills appear to be affected more by family and environmental contexts than do boys' skills.
5. It is unclear whether these findings are unique to the Salt Lake City data set or have larger implications for Head Start graduates.

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Benefits of High-Quality Child Care for Low-Income Mothers: The Abecedarian Study

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Long-term benefits of high-quality child care for parents were analyzed as part of the Abecedarian study, a randomized trial of early educational intervention for children from low-income families. Ninety-four percent of the mothers were African American ($n = 109$). When the intervention began, maternal age averaged 20 years, and maternal education averaged 10th grade. Treated children had full-time child care from early infancy through age 5. Treated children made cognitive and academic gains that persisted into young adulthood (Campbell & Ramey, 1994, 1995; Ramey & Campbell, 1984, 1991; Campbell, Ramey, Pungello, Sparling, & Miller-Johnson, under review). The effects of 5 years of free child care on the mothers were also assessed. When the children were 4.5 years old, the child care appeared to benefit younger mothers more than older mothers in terms of educational and vocational gains (Campbell, Breitmayer, & Ramey, 1986). When the children were aged 15, the relative benefits for younger mothers were still apparent (Ramey et al., 2000).

At the age-21 follow-up point, educational and vocational data were collected for 100 of the original 109 mothers. Twenty mothers (12 of treated children, 16 of control children) were age 17 or under when their child was born (the "teen mothers"), and 72 (39 treated, 33 control) were at least 18. General linear model (GLM) analysis found no main effect for group or age for years of education, but a strong trend was found for group age ($F[1, 94] = 3.87$, $p = .052$). Years of education were similar for older mothers (treated $M = 12.2$, $SD = 2.0$; control $M = 12.4$, $SD = 3.2$), but differed by approximately 1.5 years for teen mothers (treated $M = 13.6$, $SD = 4.7$; control $M = 12.0$, $SD = 3.0$). Education was dichotomized as high school or less versus post high school. Testing the full sample, the chi-square associating these categories with group was nonsignificant. When testing only teen mothers, the result was significant ($\chi^2[1, N = 28] = 3.9$, $p = .049$). Whereas 75% of the teen mothers of treated children had post high school attainment, only 37.5% of the control teen mothers had.

Chi-square analyses showed no significant association between group and maternal employment, but significant results were found when the kind of employment (Hollingshead category) was considered. GLM analysis showed a significant main effect for group ($F[1, 96] = 4.74$, $p = .032$; treated $M = 4.1$, $SD = 2.2$; control $M = 3.1$, $SD = 1.7$). The data were then dichotomized as Hollingshead score of 4 and above versus a score below 4. Chi-square showed a significant association between category and group ($\chi^2[1, N = 100] = 4.1$, $p = .042$). Whereas 55% of mothers of treated children held higher status jobs, 35% of mothers of control children did. Analyzing the data for older and teen mothers separately, the chi-square was not significant for older mothers, but the result approached significance for teen mothers ($\chi^2[1, N = 28] = 3.5$, $p = .063$). Sixty-seven percent of the teen mothers of treated children held such jobs compared with 3% of control teen mothers.

The Abecedarian study demonstrates that high-quality child care can have educational and vocational benefits for teen mothers in addition to having long lasting benefits for children. Having reliable full-time care appears to affect the developmental trajectories of teen mothers as well as those of their children.

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Early Childhood Intervention and Delinquency Prevention: A Latent-Variable Model Corroboration

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Although the effects of early childhood intervention on school competence and achievement are well documented (Barnett, 1995; Karoly, et al., 1998), few studies have linked early childhood intervention and delinquency. Two major hypotheses—the cognitive advantage hypothesis and the family support hypothesis—have been proposed to explain the link between early intervention and social competence (Reynolds, Mavrogenes, Bezruczko, & Hagemann, 1996; Yoshikawa, 1994). However, several methodological problems often occur in studies of delinquency prevention. One is measurement error in variables, which can bias estimates of effects. Many studies have also measured delinquency with either a single indicator or through a single source of report, raising concerns about construct validity. Using latent-variable covariance modeling, the study investigated two questions: (a) Is preschool and school-age participation in the Child-Parent Center (CPC) Program (Reynolds, 2000) associated with measures of delinquency, including official juvenile arrests? and (b) Do the cognitive advantage and family support hypotheses mediate the effects of program participation on delinquency?

The sample included 1,404 youth from the Chicago Longitudinal Study (1999), an ongoing investigation of the school and social adjustment of low-income minority children growing up in high-poverty neighborhoods in Chicago. Seventy-six percent of the sample participated in the CPC Program, an early childhood intervention program (Reynolds, 2000). The main measure of delinquency was official juvenile arrests from ages 10 to 17 reported by the juvenile court in Chicago and two other locations. Self-reports of arrest by age 16 and school-reported delinquency behavior from ages 13 to 18 also were included. Indicators of the cognitive advantage hypothesis were word analysis and mathematics achievement in kindergarten on the Iowa Tests of Basic Skills. The indicator of the family support hypothesis was the number of years (from ages 6 to 12) that parent involvement in school was rated average or better by classroom teachers.

Multiple regression analyses were conducted of the association between CPC participation and several measures of delinquency. Relative to the comparison group and controlling for family background, CPC preschool participants had significantly fewer juvenile arrests (0.45 vs. 0.78), lower rates of one or more arrests (16.4% vs. 25.4%), and lower rates of two or more arrests (8.5% vs. 14.6%) by age 17. No differences were found for the other measures. Participation in the school-age (follow-up) program was associated only with lower rates of school infractions (36.2% vs. 43.9%). Results of LISREL structural equation modeling corroborated the regression analysis. Preschool participation was associated with significantly fewer juvenile arrests (Standardized Coefficient = -0.11, *t*-value = -4.31). Consistent with other studies (Jenkins, 1997; Reynolds, Chang, & Temple, 1998), boys were significantly more likely to be arrested than girls. Analyses of the mediators of the link between preschool participation and delinquency prevention indicated that only parent involvement in school was a significant mediator (paths from preschool to parent involvement and parent involvement to juvenile arrests were 0.08 and -0.16, respectively). As a measure of early cognitive development, kindergarten achievement was unrelated to juvenile arrests.

Findings provide further evidence that the family support hypothesis helps mediate the link between participation in the CPC preschool program and lower delinquency. Like the previous study (Reynolds et al., 1998), the cognitive advantage hypothesis (as measured by early school achievement) was unrelated to official juvenile arrests, and thus was not a mediator of the relation between early intervention and delinquency, even though preschool participation was strongly associated with early school achievement. These findings are consistent with previous research showing the significant contributions of parenting and family socialization factors to delinquency behavior (Jang & Smith, 1997; Sampson & Laub, 1993). Corroborating and extending findings of the previous intervention study, present results increase confidence that the link between preschool participation and delinquency is explained, in part, by family support factors. Other hypotheses of effects and alternative measures of mediators should be investigated in future studies.

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Maternal Mental Health

Mental Health Promotion in Early Head Start: Lessons From Research on Postpartum Depression

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PRESENTER: Susan Dickstein

Early Head Start (EHS) serves low-income pregnant women and families with infants and toddlers to: (a) enhance children's development, (b) foster parenting competence and quality of family relationships, (c) facilitate parents' economic independence, and (d) support coordination of community resources. EHS targets families at risk for nonoptimal child outcomes based on multiple contextual risks, particularly poverty.

One well-documented risk associated with poverty is parental depression (Planos, Zayas, & Busch-Rossnagel, 1997; Sameroff, Seifer, & Bartko, 1997). Understanding the effects of maternal depression, especially during the child's 1st year, is especially relevant for EHS, which serves families during the transition to parenthood, a developmentally challenging time even in the best of circumstances. Generally, maternal depression has been associated with disruptions in maternal behavior, mother-child interaction, child developmental outcomes, and family functioning (Dickstein et al., 1998; Seifer & Dickstein, 2000).

The Family Relationships Study, a NIMH-funded investigation, focuses on maternal depression during the transition to parenthood, and differentiates lifetime history of depression from depression during the postpartum period (PPD). One hundred twenty-two families were recruited from prenatal childbirth classes. Due to other study goals, families consisted of two adult partners who were primarily White, middle-class, and well educated. Thus, the impact of depression was studied without confounding the risk of poverty.

Couples were recruited during pregnancy, and followed at 4- and 14-months postpartum. Diagnostic assessments (SCID; First, Spitzer, Gibbon, & Williams, 1996) were conducted at all assessments. Groups were formed based on timing of depressive episodes. The no illness control group (56%) had no history of Major Depression; the PPD group (15%) experienced Major Depression during the 1st year postpartum; the Other Major Depression group (29%) experienced Major Depression at a time other than postpartum. Family functioning was assessed with the McMaster Structured Interview of Family Functioning (Epstein, Baldwin, & Bishop Duane, 1982). Infant social-emotional competence was measured with the Psychological Impairment Rating Scale (PIRS; Seifer et al., 1996; Baldwin et al., 1993).

Significant Research Findings:

1. Lifetime history of depression was an impressive risk for PPD (odds ratio = 12.24).
2. PPD (in particular) was associated with infant incompetence ($F = 4.90$).
3. PPD (in particular) was associated with unhealthy family functioning ($F = 5.68$).
4. Unhealthy family functioning was also associated with infant incompetence ($r = .36$); and continued to be related even after controlling for variance associated with PPD ($r = .30$).

Implications for EHS:

1. The rate of PPD in EHS mothers is likely greater than 15% suggested by our data, given the multiple contextual risks often associated with poverty. We need to be sensitive to the presence and consequences of PPD in these families.
2. In developing preventive intervention programs, mothers at risk for PPD can be identified early by assessing lifetime history of depression during pregnancy (our results suggest a 12-fold increased risk). Programs can target reduction of intensity of depressive symptomatology even prior to onset of full-blown disorder.
3. Once enrolled in EHS, goals should include facilitation of parenting competence and enhancement of parent-child relationship quality, risks known to be associated with depression. Prevention-intervention efforts to promoting healthy early childhood development, especially in the context of maternal depression, should also include a solid family component.

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Parenting Skills of Depressed and Nondepressed African American Mothers and Female Caregivers of Head Start Children in Violent Neighborhoods

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PRESENTERS: Sally A. Koblinsky, Suzanne M. Randolph

This study compared the parenting behaviors of nondepressed and depressed African American caregivers of preschool children residing in violent communities. Police statistics, including the uniform crime index, were used to target high violent neighborhoods in Washington, DC and an adjacent Maryland county. The 207 African American, female participants were each principal caregivers of a 3- to 5-year-old child who attended a Head Start program in a violent community. The sample included 173 mothers, 24 grandmothers, and 10 other female relatives ranging in age from 18 to 67 years.

Female caregivers completed oral interviews with trained project staff-graduate students that included the Center for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977); the Parenting Practices Questionnaire (PPQ; Robinson, Mandleco, Olsen, & Hart, 1995); and the Parenting Dimensions Inventory (PDI; Slater & Power, 1987). All measures had strong psychometric properties and had been used in previous studies of low-income African American families. Caregivers were invited to volunteer for the study at their Head Start centers and were paid a small stipend for participation.

Results revealed 94 depressed and 113 nondepressed female caregivers, with depressive symptomatology indicated by scores of 16 or above on the CES-D. As predicted from the literature on depression, nondepressed female caregivers scored significantly higher than their depressed counterparts on the global scale of authoritative parenting. Within this larger construct, nondepressed caregivers were significantly more warm, easy-going, nuturant, and responsive than their nondepressed peers. Contrary to expectations, nondepressed and depressed mothers-caregivers did not differ on subscales measuring consistency, reasoning, or democratic participation in parenting. Findings further revealed that depressed caregivers scored significantly higher on the global measure of authoritarian parenting than their nondepressed counterparts, and were significantly more likely than their nondepressed peers to exhibit verbal hostility, corporal punishment, punitiveness, and directiveness in parenting. Finally, depressed caregivers scored significantly higher on the global parenting scale of permissiveness than their nondepressed peers, and were significantly more likely than nondepressed caregivers to ignore children's behavior and exhibit a lack of confidence in parenting. There was also a trend for depressed caregivers to show a greater lack of follow through in parenting than their nondepressed counterparts.

The high incidence of depression in this sample of caregivers from violent neighborhoods—with 45% of the mothers or caregivers exhibiting depressive symptomatology—underscores the need for Head Start to develop therapeutic and parenting interventions aimed at reducing mental health problems among African American caregivers in violent communities. Nonstigmatizing, family focused interventions may help Head Start caregivers acquire the skills they need to better manage the stressors in their environment. Such interventions should draw on research that identifies the strengths and coping strategies of nondepressed mothers who exhibit positive parenting behaviors despite chronic exposure to community violence. Head Start staff may likewise consider interventions that pair depressed caregivers with nondepressed caregivers with strong parenting skills who can provide childrearing assistance and social support. Mental health practitioners should also attempt to strengthen depressed caregivers' ties to institutions that have traditionally sustained low-income African American families, such as the Black church.

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Social Skills and Behavior Problems of African American Head Start Children With Depressed and Non-Depressed Female Caregivers

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PRESENTER: Suzanne M. Randolph

The social skills and behavior problems of African American Head Start children with depressed and non-depressed female caregivers were compared. Children with non-depressed caregivers exhibited more self-control and self-assertion, and were less likely to exhibit externalizing and internalizing behavior problems, than children whose caregivers suffered from depression. Implications for Head Start practice were discussed.

(Abstract from program; poster summary not available for publication.)

Examining the Relationship Between Child Behavior and Maternal Mental Health in Immigrant Families

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PRESENTER: Amy Lewin

The relationship between maternal psychological distress and behavior problems in young children is well documented (e.g., Billings & Moos, 1983; Gross, Conrod, Fogg, Willis, & Garvey, 1995). However, this body of research largely excludes children of non-English speaking parents, thereby under representing immigrant children. Little is specifically known about the prevalence or correlates of behavioral difficulties in young children from immigrant families, despite their growing proportion in the population (James, 1997). This study examined the prevalence and correlates of child behavioral concerns in two distinct groups of immigrant families with Head Start children. These two groups are from Latin American and African countries of origin and represent very divergent cultures and migration histories. The sample consisted of 290 Head Start children enrolled in the Starting Early Starting Smart program based in Montgomery County, Maryland.

Of the enrolled Head Start families, 43% were Latino immigrants, 22% were non-Latino (African, Caribbean, and Asian) immigrants, and 35% were nonimmigrants, primarily African American. Most caregivers had at least a high school degree (69%), and were employed (62%). The mean age of the children was 4.3 years (*SD* = 3.9 months), and 52% were male.

Child behavior was assessed with the internalizing, externalizing, and total problem behavior scales of The Preschool Kindergarten Behavior Scales (PKBS; Merrell, 1994), which were completed separately by the primary caregiver and the teacher. Problem behavior was indicated on each scale by a score from the caregiver, teacher, or both that fell above a predetermined cutoff. The caregiver's psychological distress was indicated by a score above a predetermined clinical cutoff on the anxiety and/or depression subscale of the Brief Symptom Inventory (BSI; Derogatis, 1993).

The prevalence of problem behavior in this sample ranged from 25-27%. There were no significant differences between the Latino immigrant, the non-Latino immigrant, and the nonimmigrant groups. However, the factors associated with child behavior problems for the nonimmigrant group were different than those for both of the immigrant groups. With one exception, there were no differences between the two immigrant groups in associated factors. Analyses presented here will focus on the children from immigrant families. In bivariate analyses, caregiver anxiety and depression, and a high score on the parent-child dysfunctional interaction subscale of the Parent Stress Index (Abidin, 1990) were each significantly related to child externalizing, internalizing, and total problem behavior for both immigrant groups. The child's gender, household income, the caregiver's use of mental health services, and the degree of violence between adults in the household were not significantly related to child behavior problems in either immigrant group. For the Latino immigrants only, the presence of only one biological parent in the home was significantly associated with externalizing and internalizing problems.

In a multiple regression analysis, the presence of: (a) only one biological parent in the home, (b) caregiver anxiety, and (c) difficult parent-child interactions was a significant, independent predictor of child externalizing, internalizing, and total problem behavior for both immigrant groups. These findings support the relationship between caregiver factors and child behavior in two different groups of immigrant families.

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The Emotional Health Needs of Low-Income Single Parents Involved with Early Childhood Programs: Evidence for Broadening the Focus of Service Delivery

C. Wayne Jones, Donald G. Unger, Marilee Comfort

PRESENTER: C. Wayne Jones

Despite well established links between poverty related stress, parental emotional health, and developmental outcomes for children, there are still very few early childhood programs serving low-income single parent families that offer a direct focus on parent-family emotional health. One barrier is the concern that parents do not want mental health services and may perceive such a focus as an unnecessary intrusion into their personal lives. Another barrier is the belief that a focus on parent-family emotional needs may undermine the program's strengths-based, family-support philosophy. In order to examine these assumptions and determine their validity, the following questions were addressed in this study: (a) What are the perceived major sources of stress for low-income single parents involved with urban early childhood programs? (b) How do these parents perceive their psychological adjustment? (c) How do they perceive their family functioning? and (d) Does this population of parents desire services to address their emotional health needs?

The sample included 218 low-income, single, mostly African American women, with a young child (median age of 2.4 years), recently enrolled in one of 21 different inner-city Early Intervention Programs (EIPs), Head Starts, or "At Risk" Preschool programs. The children were a diverse group, with 45% showing moderate to severe delays in their development. Face-to-face interviews using standardized questionnaires were conducted with parents within the first 6 months of their child's enrollment in an early childhood program.

Parents across all three different types of early childhood programs reported high levels of stress, with 54% indicating that either they or someone close to them had experienced three or more negative unexpected events within the last 6 months. This included break-up of a close relationship (31%), having additional child care responsibilities (30%), loved one seriously injured or seriously ill (29%), seriously depressed or had a nervous breakdown (22%), and increased fighting in relationships (20%). Parents also reported high levels of distress, with 68% scoring above the 75th percentile for parenting-related stress and 50% scoring above the 95th percentile; 39% percent of parents reported psychological symptoms of distress sufficient to warrant a referral for treatment. Similarly, 59% of caregivers scored in the distressed range of family functioning. Regarding service expectations from programs, parents identified child-focused and parenting related services as priorities, but 65% endorsed a desire for counseling, a service unrelated to the child or the parenting role.

The data clearly highlight the elevated parent-family emotional distress among this population and suggest that parents would be open to addressing these needs directly. For the majority of the families in this sample, however, very real and troubling emotional needs remained unexpressed and untreated because the Head Starts and EIPs in which their children were enrolled did not formally assess this aspect of parents' lives. A strong recommendation is made for EIPs and Head Starts serving low-income single parents to adopt as proactive an approach in the arena of parent-family emotional health as is taken in the physical health arena. This would involve more direct, collaborative assessment and education around these issues.

Maternal Depression, Anxiety, and Infant Development in Foreign-Born and Native-Born Families

Gwendolyn F. Foss

PRESENTER: Gwendolyn F. Foss

Experiences associated with transition to a new society have been linked to depression and anxiety (Nickolson, 1997) in the general population and in a sample of mothers of infants and toddlers (Foss, in press). While maternal depression and anxiety have been shown to interfere with normal development in infants and toddlers (Weinberg & Tronick, 1998), effects on infants of foreign-born mothers has not been documented.

The purposes of this pilot study were to investigate infant development and maternal depression and anxiety in comparison samples of native-born mothers from North Carolina and immigrant mothers from Vietnam, Laos (Hmong), and The Democratic Republic of Congo. Data were collected in the participant's home. Instruments included the Denver II (Frankenburg et al., 1990) and the Hopkins Symptom Checklist-25 (Heshbacher, Rickels, Morris, Newman, & Rosenfeld, 1980). A comparative correlational research design was used to analyze the data. There was a trend toward more depression and anxiety among foreign-born mothers but the *p* was only significant at .05 for the Hmong group. There were no significant associations between the infant's performance on the Denver II and the mother's degree of depression and anxiety. Ability of the mother to speak English was significantly associated with the infant's performance on the Denver II and her degree of depression and anxiety.

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Maternal Experiences of Childhood Rejection and Acceptance in Relation to the Quality of Mother-Infant Interaction

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Inquiries into the transmission of parenting behavior in normal (nonabusive) samples suggest that mothers who are more secure about their early parental relationships are more sensitive toward their toddlers and exhibit more positive affect while interacting with them (Crandell, Fitzgerald, & Whipple, 1997; Ricks, 1985; Ward & Carlson, 1995). In contrast, mothers who are insecure about early parental relationships or who experienced childhood rejection display more negative affect, exhibit more punitive and rejecting behavior, and are more intrusive and less responsive toward their toddlers (Belsky, Youngblade, & Pensky, 1989; Crockenberg, 1987; Eiden, Teti, & Corns, 1995; Lyons-Ruth & Block, 1996; Ward & Carlson).

The vast majority of research on parenting in normal (nonabusive) samples has focused on middle-class, Euro American mothers. Few studies, however, have investigated associations between perceptions of early parental rejection or acceptance and subsequent parenting behavior in a normal sample of economically disadvantaged, minority (non-White) adults, who nevertheless may be at risk for problematic parenting. The present study investigates these associations by examining relations between mothers' perceptions of early parental relationships and mother-child interaction in a sample of 50 inner-city mother-infant dyads of predominantly African American and Latino origin. All families are of low socioeconomic status as defined by eligibility for Assistance for Families with Dependent Children. Mothers completed a modified version of the Parental Acceptance-Rejection Questionnaire (PARQ; Rohner, 1980), a self-report scale designed to tap adults' perceptions of their relationship with their mother in childhood. Mother-infant dyads were videotaped in their homes by two researchers and asked to play with a standardized set of toys for 10 minutes. Coding was based on the Caregiver-Child Dimensions of Interaction Scale (Tamis-LeMonda & Spellman, 1998).

As predicted, mothers' childhood experience of acceptance and rejection by their mothers was significantly related to how they interacted with their own children during play. Mothers who perceived their mothers to have been rejecting in childhood were significantly less sensitive to their infants overall and were more likely to be intrusive, display negative affect, and engage in hostile teasing with their children. Other individual and contextual factors, such as maternal age and education, are discussed in terms of their role in moderating relations between mothers' childrearing history and parenting style.

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Understanding Social Supportive Processes Among Adolescent Mothers

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The way in which social support helps the adolescent mother is not clearly understood. Quantitative measures as well as in-depth interviews to explore how adolescent mothers structure and give meaning to their daily lives were investigated. Furthermore, how social support processes guide and influence outcomes associated with adolescent parenting was examined.

(Abstract from program; poster summary not available for publication.)

Parenting/Parent Attitudes

Transfer of Head Start Children's Scaffolding Behaviors to Tutoring With an Unfamiliar Adult

Jason T. Hustedt

PRESENTER: Jason T. Hustedt

During early childhood, one type of social interaction that is of particular interest is joint problem solving between children and more skilled individuals. Such interactive processes have been investigated through studies of "scaffolding," a coconstructive process by which a tutor (often a parent or teacher) works with a learner (often a young child) to solve a problem (Wood, Bruner, & Ross, 1976). While normative research has often examined scaffolding in middle-SES families, less is known about how this type of support is provided by low-income parents (Hustedt & Raver, in press). However, recent research suggests that responsive interactions between parents and their children serve as a buffer against risks associated with poverty (Chase-Lansdale & Brooks-Gunn, 1995; Huston, McLoyd, & Garcia Coll, 1994). This study focuses on the interplay between mother-child scaffolding activities and the ways in which 4-year-olds engage in scaffolding with other adults. Because characteristics of parent-child social interactions seem to influence child-peer interactions, parents' behaviors during scaffolding are likely to carry over to children's interactions with their peers (consistent with Leve & Fagot, 1997), or with unfamiliar novices. By including interactions with a trained confederate in the current research, it was possible to create a uniform task providing a clear test of 4-year-olds' tutoring skills. Thus, findings from this study have implications regarding children's ability to transfer what they have learned from parent-child interactions to interactions with other adults, classmates, and peers.

It was hypothesized that 4-year-olds would exhibit tutorial behaviors similar to those used by their parents and that children with high social competence and greater verbal abilities would be more successful at tutoring than children who were less socially competent or verbally skilled. Twenty Head Start 4-year-olds participated in the 1st year of this 2-year study. Twelve experimental group children interacted with both their mothers and with a confederate; eight additional control group children played alone while their mothers were present, and then interacted with the confederate. Two assessments occurred 1 month apart. At Time 1, experimental group children and mothers were presented with a sequence of novel toys and asked to solve problems relating to those toys, such as assembling a plastic insect by referring to a model. The Peabody Picture Vocabulary Test-Third Edition (Dunn & Dunn, 1997) was used to measure receptive language skills. At Time 2, each child interacted with an unfamiliar female undergraduate who feigned unfamiliarity with the toys. It was emphasized that the children's goal was to help her with the tasks, as they now had previous experience. Also, children's preschool teachers provided social competence ratings, using the Social Competence and Behavior Evaluation (La Freniere & Dumas, 1995). Microanalytic codes were used to characterize both verbal (e.g., help seeking) and nonverbal (e.g., modeling) behaviors of parent-child and child-experimenter dyads during scaffolding. Correlational analyses were used to compare mothers' tutoring behaviors at Time 1 with their children's tutoring behaviors at Time 2, thus investigating the hypothesis that the interactions of 4-year-old tutors with adult learners would reflect their mothers' previous tutoring behaviors during the scaffolding task.

Preliminary results indicate that children were indeed more likely to engage in the verbal scaffolding strategy of recruitment if their mothers had previously engaged in the same type of behaviors. They were also more likely to use the nonverbal strategy of demonstration if their mothers had used that strategy. However, when mothers used speech that was specifically instructive, their children were less likely to subsequently use instructive speech. Data from additional participants will be gathered to further investigate the hypothesis that children's tutoring behaviors reflect those previously used by their mothers.

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A Father of Their Own: The Value of Presence

Norman A. Peart, Elizabeth P. Pungello, Frances A. Campbell, Thomas G. Richey

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This paper presents the findings of a qualitative and quantitative study of 65 African American young adults, 25 males and 40 females, whose relationships with their biological fathers were examined. These young adults were all participants in the longitudinal Carolina Abecedarian Project, which yielded 21 years of quantitative data that was also utilized in the examination of these father-young adult relationships. The study's results highlight the roles, expectations, activities, and involvement of these fathers in their children's lives, and are thus useful to researchers and to service providers interested in working with African American fathers and their children.

All young adults in this study were interviewed at age 21. Our approach to analysis of the narrative father data was to extract from the young adults' narratives their expectations of fathers in general and of their own fathers in particular. Three expectations were most consistently mentioned: Fathers were expected to give (a) presence, (b) provisions, and (c) counsel to their children. A large majority of the young adults (92%) mentioned at least one of these three items, with the most common being presence.

Four categories of fathers were identified within these narratives. The first was Deceased, describing fathers who died while the participants were children. The second was Unknown, describing those fathers who were absent from the lives of their children from birth and whose name or appearance was reportedly unknown to the interviewee. The third was Uninvolved, describing those fathers who were known to their children but did not develop a relationship with them. The fourth was Involved, describing those fathers who were present and actively involved in the lives of their children. Each respondent's relationship with his or her biological father could be characterized as fitting one of these types.

Analysis of the study's quantitative data, obtained through interviews with participants' guardians at 5 age points (birth, 5, 8, 12, and 15), showed young adults' views of their fathers appear to depend, in part, upon their fathers' presence during childhood. The amount of father contact in childhood was not necessarily the definitive reason for the degree of father involvement perceived by the young adults, but examination of the patterns of contact in childhood suggests that this factor contributed to the young adult's perceptions of involvement. The descriptive findings from our sample demonstrated that fathers were present more in childhood for male than for female children.

The study has two primary implications. First, service providers such as Head Start personnel can encourage and support the noncustodial father's role in African American families and communities. Second, our findings indicate that a large amount of anger was associated with the perceived failure of the fathers to fulfill their expected roles in their children's lives.

The findings of this study add to our knowledge of African American families by revealing African American children's experiences, expectations, and evaluations of their biological fathers. The findings are thus useful to other researchers and to service providers interested in working with families in this cultural group.

A Comparison of Maternal and Paternal Talk to Toddlers in Low-Income Families

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This study draws on three distinct but related areas of research. First, recent research demonstrates that fathers are spending more time caring for children as a result of changes in economic and social factors (Cabrera, Tamis Le-Monda, Bradley, Hofferth, & Lamb; 2000). Second, researchers concerned with the role of the linguistic environment of young children have revealed continuities and discontinuities among parents (primarily from middle-class families) in how they talk to their children. The majority of differences in talk between mothers and fathers have been found in the domain of pragmatics (i.e., conversation skills; Barton & Tomasello, 1994; Berko Gleason & Greif, 1983; Berko Gleason, 1975). Third, while there is a tendency for the majority of studies on mother-child interaction to focus on middle-class samples, there is a growing body of research on social class differences in mother-child verbal interaction. For example, Hart and Risley (1995) have shown that the amount and type of parental talk addressed to children predicts children's language abilities, particularly vocabulary size, upon preschool entry.

In light of the changing role of the father in recent history, and building on past research on maternal versus paternal child-directed speech and social class differences in parent-child interaction, this study was designed to describe similarities and differences in how low-income mothers and fathers verbally interact with their 24-month-old toddlers, and whether previous findings in middle-class samples hold true for a low-income sample.

Subjects were low income mothers and fathers of 17, 24-month-old toddlers. These participants were drawn from a full sample of 146 dyads participating in a longitudinal study on the effectiveness of an Early Head Start program in Wyndham County, Vermont. Mothers and fathers were videotaped separately at home in dyadic interaction with their child during a 10-minute book-reading and toy-playing session.

Analyses were conducted for mothers, fathers, and children to determine the total amount of words spoken, the Mean Length of Utterance (MLU), and the variety of vocabulary. Additionally, the total number of questions, wh-questions, directives, prohibitions, and requests for clarification used by mothers and fathers were calculated. Additional analyses investigated the proportion of time mothers and fathers chose to spend on book reading during the 10-minute period, and the relationship between parental education level and the quantity and quality of talk to their children.

Some results from this low-income sample mirror those from middle-class samples, while others do not. As with previous studies of middle-class parents, no differences were found in the linguistic complexity (i.e., grammar, quantity of talk) of child-directed maternal and paternal speech. However, some differences emerged in the domain of pragmatics. Specifically, fathers were found to produce significantly more wh-questions and requests for clarification than mothers. Contrary to previous findings with middle-class samples, the fathers in this low-income sample did not produce significantly more directives or prohibitions than mothers. However, it is unclear whether this is a function of social class or gender differences. Future research should be conducted to help distinguish between gender and social class differences in parental communicative input.

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Mothers' Parenting Practices and Children's Peer Social Skills as Predictors of Girls' and Boys' Peer Acceptance

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Responsive parenting practices are linked to children's increased social competence (e.g., Baumrind, 1996). Boys of responsive parents are more likely to be accepted, whereas boys of unresponsive parents are more likely to be rejected by peers (Cohn, 1990). Pettit, Clawson, Dodge, and Bates (1996) found that girls and boys with higher levels of social skills were more accepted by peers. Chapters in Parke and Ladd (1992) also suggest links between family and peer relationships.

In order to inform the literature on peer acceptance of children from low-income populations, this research examined the relationship of maternal parenting practices in Head Start to girls' and boys' peer social skills in Head Start and peer acceptance 1 year later. Participants included 87 mothers and their children (47 boys, 40 girls) from the South Central United States. Mothers' ages averaged 29.3 years and children averaged 4.6 years in the fall of the Head Start year. Maternal education consisted of the following: (a) 13% did not have a high school diploma, (b) 37% completed the 12th grade, (c) 28% had some college, (d) 13% were VoTech graduates, and (e) 6% were college graduates. Sixty-six per cent of the mothers were married or remarried. Fifty-nine percent of the mothers had an income less than $1500 per month. Maternal ethnicity included White (75%), Native American (22%), African American (1%) and Multiethnic (2%).

Maternal parenting practices were assessed during the children's Head Start year using the Computer-Presented Parenting Dilemmas (CPPD), an interactive computer assessment modified from Holden's Computer Presented Social Situations (Holden & Richie, 1991). The authoritarian factor (alpha = .86) included such items as yelling and spanking, verbal power assertion (i.e., telling the child to "Do it because I said so."), and ignoring child distress. Rejecting (alpha = .70) included: ignoring the child's aggression, giving the child inappropriate treats for aggression, not hugging a distressed child, and other hostile behaviors.

In the Head Start year, mothers and children were videotaped for 4 minutes during the Mother-Child Teaching Task (MCTT; Sigel & Flaugher, 1980). Tapes were transcribed and coded for the following maternal behaviors: positive feedback (i.e., praise and encouragement) and takes over task (i.e., contrary to the instructions, mother takes the boat away from the child and folds it herself). Interrater reliabilities for these tasks were .98 and .78, respectively.

Children's peer social skills were assessed during the Head Start year. Three measures are relevant: (a) Howes' Rating Scale for Social Competence with Peers (RSSCP; Howes, 1988-subscales: difficult, hesitant, and sociable, all alphas > .70); (b) the California Preschool Social Competence Scale (CPSCS; Levine, Elzey, & Lewis, 1969-subscales: peer involvement and shares, both alphas > .80); and (c) the Preschool Behavior Questionnaire (Behar, 1977-subscales: hostile/aggressive and anxious/fearful, both alphas >. 70).

A peer acceptance inventory was modeled after the instrument used in Ladd (1990) and Ladd and Price (1987). For each target child teachers identified numbers of male and female friends and close friends in the classroom, but did not evaluate mutuality of friendship. This process yielded four peer-acceptance measures: (a & b) numbers of same-sex friends and close friends, and (b & c) numbers of opposite-sex friends and close friends.

Following correlation analyses, relationships between predictors and outcomes that attained significance ($p < .05$) were further analyzed using hierarchical multiple regressions. Predictors were entered simultaneously, after controlling for income. Results revealed that for girls in Head Start, mothers' rejecting parenting practices were inversely related to peer involvement while positive feedback was positively related to anxiety. For boys, authoritarian parenting practices were positively related to anxiety. Results for peer acceptance in kindergarten revealed that for girls, mothers' authoritarian parenting practices predicted fewer opposite-sex friends. In contrast, girls' sociability predicted more same-sex close friends. No parenting practices predicted peer acceptance for boys.

The current study sheds some light on important differences in relationships between parenting practices and outcomes for girls and boys. First, mothers' positive feedback predicted anxiety for daughters, whereas their authoritarian parenting predicted anxiety for boys. Second, rejecting parenting was related to social skills for daughters but not for sons, suggesting that hostility had an impact on daughters but not on sons.

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Parenting Styles as Related to Academic Achievement: A Developmental Perspective

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The aims of the current study were: (a) to explore the relationship between academic achievement and three components of authoritative parenting (parental acceptance, psychological control, and lax behavioral control) in a diverse sample of Head Start graduates; and (b) to investigate developmental changes in the authoritative parenting-academic achievement relationship across elementary school and middle/high school. Seventy-three Head Start graduates and their primary caregivers were interviewed in their homes. All children were enrolled in the 3rd–9th grades in the Denver Public Schools at the time of the study. Data were analyzed using setwise regression with listwise deletion to find the most parsimonious model for each measure of achievement (standard reading and math scores).

Results suggest that authoritative parenting is positively related to all types of academic achievement. However, parenting variables were better predictors of standardized test scores than of grade point averages. Findings run contrary to previous research (e.g., Steinberg, Elmen, & Mounts, 1989) that suggested all three components of authoritative parenting make significant, independent contributions to academic achievement. Rather, results of the current study suggest only two components of authoritative parenting (psychological control and lax behavioral control) are significant predictors of academic achievement. There was limited evidence to suggest developmental differences in the authoritative parenting-academic achievement relationship, such that parental use of psychological control was significantly related to achievement among middle and high school students, but not among elementary school children.

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Parent-Child Interactions in Low-Income, Inner City Fathers

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Researchers have increasingly recognized the important role fathers play in children's cognitive and social development. Fathers' emotional investment in their children's lives and their provision of necessary resources to them are associated with indicators of children's cognitive development and social competence (Lamb, 1987, 1997; MacDonald & Parke, 1984; Radin, 1982). Paternal interaction, in terms of the extent to which fathers experience direct contact, caregiving, and shared interaction with their children, has been identified as an important indicator of father involvement (Lamb, 1987, 1997).

To date there is little research on the quality of father-child interactions. Most research is based on mothers' reports, interviews with fathers, and observations of the types of play and caregiving fathers engage in with their children.

In the present investigation, we examined the interaction styles of 50 ethnically diverse, low-income, inner city fathers/father figures engaged in play with their 18- to 30-month-old children. Specifically, our goals were to: (a) assess associations between the quality of fathers' interactions with children during play, (b) compare the quality of father-child play interactions in resident versus nonresident fathers, (c) describe the quality of father-child play interactions in relation to other types of father involvement, such as fathers' level of availability and responsibility.

Father-child interactions were videotaped in the children's homes. Dyads were presented with a standard set of age appropriate toys, and interactions were videotaped during 10 minutes of semi-structured free play. Father-child interactions were coded from videotapes using a 5-point Likert Scale. Various dimensions of paternal interactions were coded, including positive and negative affect and touch, responsiveness to distress and nondistress cues, intrusiveness, flexibility, level of involvement, teaching style, and provision of verbal stimulation. Toddlers were coded on both social and cognitive dimensions of behavior, including positive and negative affect, responsiveness, involvement with toys, vocalizations, emotional regulation, bids toward father, and persistence during play.

To address the first question, relationships between parenting style and toddler interaction were analyzed. Dimensions of father-child interactions were found to be affected by children's gender, emotional regulation, and activity level more so than by children's language, play, toy involvement, or persistence. Greater activity level in children was associated with less positive affect overall, less participation with child, less language usage, less responsiveness, and less emotional attunement in fathers.

To address the second question, relations between fathers' interactions in nonresident versus resident fathers will be compared in ongoing analyses. To address the third question, we are currently analyzing associations between fathers' interactions and other types of involvement that were assessed through interviews with fathers.

Findings are expected to contribute to: (a) the growing body of multidimensional literature on parenting, particularly that of fathers, and (b) work examining the nature of parent-child relationship in terms of identifying parenting profiles in involved low-income, inner city fathers. The extent to which the quality of these early father-child interactions exert long-term and meaningful influence on the father-child relationship as well as on children's cognitive and social adjustments remains to be examined.

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Child Health, Risk for Abuse, and Parent Involvement in Head Start

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Unrealistic child-related expectations, negative attitudes towards child rearing, and distorted views of parent-child relationships have been found among abusive parents (Howes & Cicchetti, 1993; Chilamkurti & Milner, 1993). Head Start families typically experience low levels of income and education and may face high levels of stress, factors frequently linked to potential child abuse (Belsky, 1993; Cicchetti & Lynch, 1995; Zigler & Styfco, 1993). Prior research has established modest support for positive associations between parent involvement in Head Start and improved perceptions about parent-child relationships (Lamb-Parker, Piotrkowski, Kessler-Sklar, & Baker, 1997). This prospective, longitudinal study investigated the relationships among parental attitudes towards child rearing (a proxy for potential abuse), children's developmental progress, and parent involvement in Head Start.

The sample included 172 families from a larger two-cohort, longitudinal study on Head Start parent involvement (Lamb-Parker et al., 1997). Mothers were 21-62 years old, were predominantly Latino (98%), and many were single parents (68%). Annual income was $10,000 or less for 83% of the mothers, and many did not graduate from high school (42%). Children were 3–4 years old, and 50% were girls. Parental attitudes were assessed using the Adolescent-Adult Parenting Inventory (AAPI; Bavolek, 1984) at the beginning (T1) and end of Head Start (T2). Children's developmental progress was assessed using the Early Screening Inventory Parent Questionnaire (ESIPQ; Meisels & Wiske, 1988) at T1. Parent involvement was determined by the Parent Involvement Information Protocol (PIIP, Part A; National Council of Jewish Women, 1991) at T2.

Significant correlations were found at T1, but not at T2, whereby the more tasks not achieved by the child, the greater the belief in the value of physical punishment, the greater the lack of empathy, the more endorsement of role reversal, and the more inappropriate expectations for the child's abilities. After controlling for mother's education and age, a significant main effect showed that parents involved in activities above the median number endorsed more inappropriate expectations than parents involved below the median number. A significant interaction was also found for improved attitudes about role reversal over the Head Start year, depending on level of parent involvement. Parents involved in activities above the median reported improved attitudes about role reversal over time than parents involved in activities below the median. Univariate tests revealed significant main effects whereby parental endorsement of role reversal and lack of empathy were significantly higher for children with 11 or more tasks not achieved than for children with 0–5 tasks not achieved.

These findings indicate that more participation in Head Start activities over the year was associated with improved parental attitudes about role reversal. However, the attitudes of the less involved parents were slightly more appropriate at the outset, which may indicate a bias of who became more or less involved. For children with more tasks to achieve, parental attitudes about children tended to be less appropriate. These findings may have potential implications for the parent involvement component of Head Start. For example, workshops can be designed to specifically address the inappropriate attitudes and expectations held by some parents.

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Promoting Mental Health

The Therapeutic Preschool: An Early Intervention Model

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The growth in the number of young children experiencing severe emotional and behavioral difficulties is of increasing concern to both educators and mental health practitioners. With changing definitions of the nuclear family and the rise in the use of day care, it is not uncommon to find children who are unable to remain in traditional day care and preschool settings due to unmet behavioral, emotional, and cognitive needs. Like older youngsters requiring more "restrictive environments," increasingly these children are removed from the mainstream and placed in therapeutic preschools.

Therapeutic preschools or nurseries range from serving the emotionally disturbed young child to those with physical disabilities. Some programs function purely from a mental health perspective, while others from an educational one. For example, some models use mental health professionals within the classroom throughout the school day, while others use therapy as an adjunct service to classroom teachers. There appears to be great diversity between programs regarding structure and philosophy as well as the population served.

Unfortunately, little research has been conducted regarding the services provided by therapeutic nurseries. These programs tend to function autonomously and program information is limited. Centers have little access to another facility's expertise and resources. There is no current national association to assist in coordinating these programs for the purposes of sharing information or setting standards.

Under the auspices of George Washington University and the Reginald S. Lourie Center in Rockville, Maryland, a small national survey was conducted regarding therapeutic nursery programs. The purpose of the study was to gain useful information from other centers as well as aid in evaluating the Lourie Center's own program. Survey topics included demographics, center operation, family involvement, mental health services, and staffing.

Results reflected the diversity of services provided by various programs. This poster presentation highlighted varying philosophies of treatment, client populations, family involvement, and mental health services. The display also illustrated the struggles facing these facilities as well as the study's limitations.

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Community Innovation in Family-Teacher Collaboration: A Training Curriculum Addressing the Mental Health Needs of Young Children

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Project SUCCEED in Head Start is a research and demonstration project funded through the United States Department of Education, Office of Special Education Programs (OSEP). This project is a collaborative effort between Portland State University's Regional Research Institute (Graduate School of Social Work) and an Oregon Head Start program. The coprincipal investigators for the project are Dr. Barbara Friesen and Dr. Steffen Saifer. The funding for the project began in October 1998 and continues for 4 years.

The five key components of the project are: (a) developing and implementing a training curriculum for families and staff, (b) enhancing support for family and staff, (c) providing direct child interventions, (d) augmenting the existing process of transition to kindergarten, and (e) enhancing community capacity. Family members and Head Start staff are involved with all phases of the project and have key roles serving as curriculum developers, reviewers, trainers, and coaches.

The school year 1999-2000 was a pilot year and focused primarily on the training curriculum and data collection activities. The training curriculum addresses social and emotional development of young children and strategies for addressing challenging behaviors at home and in the classroom. The training curriculum was developed through a joint parent and teacher workgroup, and is implemented by and for groups of parents and teachers together. The vast majority of the parent and teacher participants responded "well" or "very well" when asked how well the training curriculum helped in dealing with challenging behaviors at home or in the classroom.

A total of six classrooms participated: four intervention and two comparison. Classrooms included both half-day and full-day/full-year models. Family interviews were completed with a total of 44 families of children in these classrooms. Nineteen teachers and teaching assistants also participated. Pre and post data are being collected on classroom climate using the Early Childhood Environment Rating Scale (Harms & Clifford, 1980), and teachers completed a measure of stress in teaching young children. Pre and posttest data on individual child functioning were collected from both parents and teachers with the Child Behavior Checklist and Caregiver-Teacher report forms (Achenbach, 1991) and the Devereux Early Childhood Assessment (LeBuffe & Naglieri, 1998). Other scales used with families were the Family Support Scale (Dunst, Trivette, & Deal, 1998), a component of the Family Empowerment Scale (Koren, DeChillo, & Friesen, 1992), and the Parenting Stress Index (Abidin, 1995).

The project facilitated the formation of the Community Partnership Committee, consisting of parents, Head Start staff, and professionals from early childhood, mental health, education, social service, health, and family support agencies in the community. This committee, in collaboration with project SUCCEED, has been working on identifying issues and taking steps to address the ongoing mental health needs of young children in the community, particularly those served by Head Start.

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Intervention With Multiethnic Head Start Children: Prevention of Precursor Behaviors to Later Violence and Substance Abuse

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This study examined the effectiveness of The Incredible Years Parent and Teacher Training (located in Seattle, WA; *www.incredibleyears.com*) programs to reduce the risk of later violence and substance abuse in young, multiethnic, high-risk Head Start children. Participation in intervention was expected to reduce risk (harsh parent and teacher discipline and child home and school behavior problems) and increase protective factors (positive parenting, parent-teacher bonding, and positive classroom management) compared to a control condition.

Fourteen Head Start Centers were randomly assigned to intervention (Incredible Years parent and teacher training) or control (regular Head Start program). Sixty-one Head Start teachers and 272 Head Start mothers and their 4-year-old children participated in the project. Parents and teachers in the intervention condition participated in The Incredible Years 16-week group parenting program and the 4-day teacher-training program. Control classrooms received the regular Head Start curriculum. Reports and observations of parent, child, and teacher behavior at home and at school were collected at baseline, post intervention, and 1-year follow-up.

Construct scores were created for each risk and protective factor (negative and positive parenting, child conduct problems at home and at school, and teacher classroom management). Each construct contained both independent observations and parent or teacher report of the behavior. Analysis of covariance with corresponding pretest scores as covariates were conducted for each construct score. Intervention effects were found for mother's negative and positive parenting, and teacher's classroom management style. Intervention effects were found for parent-teacher bonding in mothers who attended at least half of the intervention sessions ("attenders"). Intervention effects were also found for children's school behavior, and for home behavior in "attenders." One year later, the parent effects were maintained for "attenders."

Children whose aggressive and noncompliant behavior was in the clinical range at baseline showed more clinically significant reductions in these behaviors than control children at post intervention and 1-year follow-up.

The Incredible Years Parent and Teacher Training programs are a cost effective way of reducing risk factors and enhancing protective factors with the long-term goal of preventing violence and substance abuse. Parents and teachers who participated in the program showed more positive interactions with children and used less harsh discipline than controls. Intervention children showed fewer conduct problems and were more socially skilled than control children. These programs are well suited for delivery in Head Start centers and are highly evaluated by parents, teachers, and family service workers.

Enhanced Mental Health Services in Head Start: The Ventura County Head Start Model

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PRESENTERS: Michael Murphy, Creda Nowlin

This poster described the Enhanced Mental Health Services Program (EMH) in Child Development Resources (CDR) of Ventura County, Head Start. The EMH program links psychosocial outreach (routine screening) with a broad range of prevention and intervention services that are strength based and tailored to the developmental, cultural, and contextual needs of children and families (Ventura Model; Jordan & Hernandez, 1990).

During the 1st full year of the program (1997-98), the parents of nearly all of the 1,103 students who enrolled in CDR Head Start filled out a one-page questionnaire (the Child/Parent/Services Checklist or CPSC) that included the short form (Gardner et al., 1999) of a standardized, validated child mental health screen (the Pediatric Symptom Checklist; Jellinek et al., 1999) and a parent screen (the Mental Health Index; MHI-5; Stewart, Hays, & Ware, 1988). In addition to these two symptom-based screens, the CPSC also contained two single-question items asking parents whether they wanted additional services for mental health problems for their children or themselves.

A total of 1,040 CPSCs were returned and more than one third (38%) of the 996 forms with complete data showed psychosocial risk on at least one of the four mental health problem indicators. A continuum of care was provided, ranging from in-service education for all staff, to parenting skills classes and support groups offered to all parents, through referral, evaluation, and services for students and parents who were identified as being at risk.

Three paraprofessional mental health workers, called Family Development Specialists (FDSs), evaluated the positive questionnaire screens and provided services for cases in which mild to moderate mental health issues were involved. Family Development Specialists and other staff also offered parent support groups, parenting skills classes, and monthly case conferences at the centers. Three licensed clinicians from Ventura County Mental Health evaluated children and families with the most serious mental health problems, provided supervision for the FDSs, and attended case conferences.

Over the course of the school year, a total of 322 children and families were referred, and 232 received services. At the end of the school year, the screening questionnaire was readministered to 111 parents. Of the cases that had initially screened as at risk on any of the four indicators on the CPSC, those that received enhanced mental health services showed significantly greater improvements in both child (PSC) and parent (MHI-5) functioning scores than positively screened cases that did not receive such services.

Surveys completed by staff and parents at the end of the year indicated very high levels of satisfaction with the program. Findings from the 2nd year of the program showed that students with mental health problems who received services had significantly larger gains in educational test scores than students with mental health problems whose families did not receive mental health services.

The evaluation showed that it was possible to implement an enhanced mental health services program in Head Start and that such a program was associated with improved outcomes for children and parents as well as high levels of parent and staff satisfaction.

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Family Wellness in Head Start: The Kern County Model

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PRESENTERS: Robin Scheuerman, Steven F. Bacon

Among 58 counties in California, Kern County ranks fifth highest for occurrence of teenage births. While statewide, 5.7% of adolescent females are mothers, Kern County's rate is 8.2%. Children of adolescents are at increased risk for premature birth, child abuse, infant mortality, and the associated problems of growing up in poverty. The Kern County Economic Opportunity Corporation (KCEOC) was established to provide direct services to low-income residents. KCEOC provides a variety of services for all ages, including the WIC program, childhood immunizations, Child Development and Education Services, State Funded Migrant and General Child Care, Head Start, Kern County Food Bank, Home Energy Assistance Program, mental health services, family preservation and support, HOME Program, supportive housing, Help Line, Youth Services Program, AIDS education, Family Health Center, Breast Cancer Intervention, and the Senior Brown Bag Program.

One of KCEOC's programs, the Kern Parent Child Center (KPCC), is a proactive child abuse prevention program targeting families at high risk. KPCC provides a continuum of care through supportive services for family health care, prenatal care, postnatal support, mental health assessments, substance abuse referrals, case management, assistance with food, housing, utilities, employment, and Head Start placements. Through KPCC, an intensive program is underway in one Kern County community that targets teen mothers and their children. Specific objectives include: (a) increasing the involvement of teen fathers in the lives of their children; (b) reducing the rates of subsequent unplanned pregnancies; and (c) improving the physical, cognitive, and social-emotional outcomes of these at-risk children. Teen parents are identified and referred by the local high school, Healthy Start Collaborative, churches, law enforcement, and the public health department. Parenting teens receive weekly home visits by outreach workers and participate in weekly center-based activities. Home visits provide support and education in the areas of child-parent attachment, discipline, child abuse prevention, and child development. Center-based activities include classes in birth control, intimacy, self-esteem, and decision making, as well as social activities to reduce isolation, increase social support, and facilitate child-parent bonding. Teen mothers and fathers also participate in school or work programs to promote financial independence.

Evaluations of each mother and child are made upon entry into the program and at subsequent 6-month intervals. A longitudinal research design will follow these families for 2 years and compare them with a control group from a nearby community with similar demographics. Parenting outcome measures include the Child Abuse Potential Inventory (Milner, 1986), the Parenting Stress Index (Abidin, 1995), and the Family Environment Scale (Moos & Moos, 1994).

Children's physical, cognitive, and social-emotional outcomes are evaluated by the Bayley Scales of Infant Development II (Bayley, 1999) and child behavior checklists. A survey assessing satisfaction with program services, and a survey assessing each family's use of health services, children's health status, subsequent pregnancies, and parent employment status, were developed for this study. To date, several families have been pretested, but none have been enrolled long enough to assess the effectiveness of the program. Satisfaction surveys suggest a high level of satisfaction with the program.

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Empowering Parents Through Nursing Home Visits: The Napa County/Touchpoints Model

Kristie Brandt, J. Michael Murphy

PRESENTER: J. Michael Murphy

This poster describes a program in Napa, California that assessed whether home visits that attempted to empower parents by using a more relational, developmental, and strength-based approach were associated with better outcomes for high-risk parents as well as their infants. The theoretical framework for this program is called Touchpoints.

The Touchpoints model was developed by Dr. T. Berry Brazelton (1992; Brazelton, O'Brien, &

Brandt, 1997) to help professionals who work with young children and their parents to move more comfortably through the developmental and contextual transitions of early childhood. Touchpoints empowers parents in a number of ways, including fostering deeper relationships between parents and providers, using a strength-based approach, and promoting parent-child bonding (Brazelton et al., 1997).

The objective of the study was to determine if using the Touchpoints Model in perinatal home visiting (HV) impacted the mental health and well-being of at-risk mothers and their infants at 6-months postpartum. Participants were 70 mother-infant dyads from Napa Valley's Comprehensive Perinatal Services Program (CPSP), which provides support and education to pregnant women who have Medi-Cal (Medicaid) as their health insurance. All pregnant women with expected due dates in a certain range who were rated as being at moderate to high bio-psycho-social-nutritional risk were invited to participate in the study.

Three groups were studied. One group ($n = 20$) was dyads who were randomly assigned prenatally to receive home visits from Public Heath Nurses (PHNs) who had been trained in Touchpoints. The rest of the subjects were randomly assigned to receive only perinatal care as usual, with PHN home visits given only when clinically indicated. One subgroup ($n = 15$) was composed of dyads who eventually received home visits from PHNs who had not received Touchpoints training. The other subgroup ($n = 35$) was dyads who never received PHN home visits.

Outcomes assessed were: (a) parental mental health on the Edinburgh Maternal Depression Scale (Cox, Holden, & Sagovsky, 1987), Mental Health Index (MHI-5; Stewart, Hayes, & Ware, 1988) and the Basis 32 (Eisen, Dill, & Grob, 1994); (b) parent satisfaction with care on the Child and Adolescent Services Assessment (P-CASA; Farmer, Angold, Burns, & Costello, 1994); (c) parent-child interaction on the Nursing Child Assessment Satellite Training (NCAST; Teaching Version; Sumner & Spietz, 1994); and (d) the Ages & Stages Child Development Questionnaire (6-Month Form; Bricker, Squires, Kaminski, & Mounts, 1988).

By the time the dyads were 6-months of age, those in the Touchpoints + home visits (TP-HV) group were functioning better on virtually all measures of parent and child psychosocial functioning than dyads who had received non-Touchpoints-based HVs or no home visits. Scores on standardized measures of parent mental health and parent satisfaction with care, parent-child interaction, and infant psychosocial development were significantly higher for the TP-HV group than for either of the comparison groups.

The current study joins others in providing evidence that perinatal home visiting programs are associated with better outcomes for high-risk infants, and is one of the first to show that a more relational, developmental, and empowering approach may lead to better psychosocial outcomes for parents as well.

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What I See, What I Do, and How I Do It: Head Start Staff Perspectives on Young Children's Mental Health

Sandra Luz Lara, Lisa A. McCabe, Jeanne Brooks-Gunn

PRESENTERS: Sandra Luz Lara, Lisa A. McCabe

Much research demonstrates the importance of emotional and mental health issues, such as aggressive behavior in early childhood, for children's later development (Loeber, 1990; Spivack, Marcus, & Swift, 1986). In addition, previous research has found that teachers' strategies, such as lax or over reactive discipline methods, influenced children's behavior, and children's "misbehavior" influenced teachers' strategies (Arnold, McWilliams, & Arnold, 1998). Other research has examined state and local policies that affect teachers' ability to address children's mental health needs (Knitzer, 1993). Knitzer points out that problematic systems for addressing children's mental health needs prevent school administrators and teachers from referring children to the appropriate service agencies.

This investigation expands the findings of researchers like Arnold et al. (1998) and Knitzer (1993) by taking a qualitative look at problematic behaviors and mental health issues specifically in Head Start classrooms. We focus on three questions: (a) What behaviors do teachers and administrators see as problematic? (b) What strategies does staff use to address children's inappropriate behavior in their classrooms? and (c) How do teachers' strategies for addressing children's mental health needs vary within the context of center protocol and procedures?

Focus groups were held with 25 Head Start staff from five Head Start programs in two urban cities. Groups of two to five staff from various racial and ethnic backgrounds participated in multiple focus groups over a 6-month period. Discussions were transcribed verbatim and analyzed using both inductive and deductive techniques to identify themes of interest to the investigators, as well as themes that emerged from the data.

Across sites, staff reported similar concerns regarding children's problematic behavior. For example, staff identified an inability to resist (e.g., hitting another person or throwing an object), an inability to focus on one task at a time, and an inability to reflect on their own actions as problematic child behaviors.

Participants reported using multiple strategies within the classroom to address behaviors of concern. Verbal strategies (e.g., talking to the child or telling the child to stop), physical measures (e.g., removing the child from the classroom), and follow-up (e.g., involving other staff members or parents) were all reported by Head Start staff across sites.

In this sample, referrals to mental health consultants were few, primarily because teachers and administrators reported undertaking the task of meeting these needs onsite and in collaboration with parents. These practices avoid "labeling" a child, as can happen when children receive special services. In addition, by not referring children for mental health services outside the center, teachers avoided unnecessarily alarming already overburdened parents.

We also found evidence that individual strategies varied within the context of center-level protocols and procedures. Horizontal centers utilized a more collaborative approach to addressing children's problematic behaviors with center directors, staff, and mental health consultants working together. In Vertical centers, a more hierarchical and rigid approach existed in which teachers con-sulted with a gatekeeper before working with other staff, mental health professionals, or parents.

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Promoting Preschoolers' Social-Emotional Development Using a Home-Based Head Start Model

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The home-based Head Start model offers a unique opportunity to promote the parent's role as primary teacher for his or her child, by combining preschool group services with more individualized lessons provided in the home. The home-based Head Start model is also ideally suited to promote attachment behaviors within the parent-child relationship. Specifically, the lessons conducted in the home with parent and child are designed to encourage increased sensitivity and responsiveness on the part of the parent, as well as the development of age-appropriate expectations for social-emotional and educational achievement. Teachers draw attention to the child's cues and signals to facilitate the parent's involvement in the lesson and understanding of both the child's emotional and educational needs. Promoting these types of interactions between parent and child are beyond the scope of the more traditional center-based Head Start intervention programs, but are explicit goals of the home-based Head Start model. With these issues in mind, a program evaluation was conducted to evaluate the efficacy of a home-based Head Start program in promoting social and emotional development in preschool children.

The Columbia University Head Start (CUHS) program provides home-based Head Start services to a high-risk population of preschoolers in a low-income, largely Latino, urban community of New York City. Participating families receive individual weekly home visits by a team of bilingual educators, as well as group center-based services. Individual home visits are tailored to the educational and social-emotional needs of the child, using materials provided by the educational team. Goals and objectives of the lesson are explained to the parent, and he or she is encouraged to participate and to take note of the child's strengths and needs. Teachers model strategies for working with the child, and encourage responsiveness and sensitivity to the child's needs and developmental stage. Parents are asked to take an active role in teaching their child new skills and reinforcing those that have been mastered.

Center-based services include a language-enriched socialization group for children and adult development workshops for parents. During the weekly center-based sessions, children are introduced to traditional preschool concepts and knowledge. An emphasis is placed on the development of interpersonal skills and ability for self-regulation that will leave them better prepared to attend and learn in school. These group sessions allow children to practice their developing social skills and gain experience in peer interaction within a fairly structured environment. Simultaneously, parents attend workshops focusing on areas such as child development, nutrition, health and safety, as well as computer instruction and ESL skill development. The adult development lessons focus on the parents themselves, encouraging them to develop a sense of competence in their own skills.

The initial program evaluation focused on the development of socialization skills and reduction of behavioral difficulties, and served as a starting point for the larger program evaluation project to be completed the following year. Because of the introduction of the universal prekindergarten program within the community, a high rate of turnover was experienced for participants in the CUHS program, leading to a fairly small sample size for the initial program evaluation.

During this 1st year, children's social-emotional development was assessed through pre and posttest ratings completed by classroom teachers; and for a subset of participating children, parents completed pre and posttest ratings as well. Social skills were assessed for 26 Head Start children using the Social Skills Rating System (SSRS; Gresham & Elliott, 1990). In addition, internalizing and externalizing behavior problems were assessed for the subgroup of 16 children that completed at least 7 consecutive months in the program, using the Caregiver-Teacher Rating Form (CTRF; Achenbach & Rescoria, 2000). A smaller subgroup of 11 parents completed the Child Behavior Checklist (CBCL; Achenbach, 1992).

Results indicate significant improvement in children's social skills, and a significant reduction in internalizing and externalizing behavior problems. These results provide support for the use of home-based Head Start services in promoting the social-emotional development of preschool children, and suggest that interventions aimed at promoting the parent's role as primary teacher for their child offer a unique and valuable method of facilitating the child's development.

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Leading Edge Mental Health Consultation: A Site-Based Model to Teach Strength-Based Skills to Teachers, Children, Parents, and Administrators

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PRESENTERS: Cherri L. Gallison, Paula Zaninovich, Lillian Waddle-Ashton

Multnomah County's Department of Community and Family Services Early Childhood Mental Health Consultant Team has provided mental health prevention and intervention services onsite to local Head Start programs since 1990. The first comprehensive consultation partnership began with Albina Head Start.

Albina was concerned existing community mental health services did not meet their family's needs. Despite thoughtful referrals to outside mental health agencies, families would never arrive. Even when they did get to community services, they soon quit due to scheduling conflicts or lack of adequate support. Also, Albina Head Start needed training, information, and support for staff on how to deal with troubling behaviors and events occurring in the lives of children they were educating. The existing community mental health clinic system could not get this kind of consultation and training to the Head Start staff when and where they needed it—in the classroom. Thus, on-site collaboration was born.

Expanding over the past 10 years, the present mental health delivery model includes a full service continuum of direct care, staff and parent training and consultation, curriculum development, program design, and administrative consultation onsite. The model captures many of the elements that Knitzer (2000) describes in her paper on best practices, *Early Childhood Mental Health Services: A Policy and Systems Development Perspective.*

The core of the program finds consultants delivering mental health services to the children, teachers, and parents wherever they are—in the classroom, on the playground, at work, in their car, in the home, or during naptime. Weekly classroom teacher-coaching visits are designed to identify behavior problems early and focus on building social skills for all children in the classroom.

Programmatically, consultants have developed and implemented violence prevention and conflict resolution programs geared toward the developmental strengths of 3- to 5-year-olds. These social skills programs address short attention spans and limited concept development using puppets, stories, repetition, and simple concepts. Children learn the "Stop, Talk, Walk" strategies and how to deal with conflicts between themselves without needing to engage an adult. Behavior management, which originally involved long time outs, was redesigned to include developmentally appropriate redirect and a "Tell, Show, Do" model guided by the teacher. The original "Disciplinary Policy" became step-by-step "Guidance Procedures" and time outs are now rarely employed.

Program consultation to administration focused on support for both children and teachers. Teachers learned the latest in brain research and effective teaching strategies through workshops and weekly consultation coaching in their classrooms. Teachers were also assisted to create individually tailored strength-based support programs for each child's unique developmental and emotional needs. Program communication was refined to provide staff support during high stress times. Systems were implemented to positively reinforce staff for new skill usage.

At the administrative level, consultants worked to develop open lines of communication so that program refinements to improve both direct and indirect mental health services would be accepted. Parent, teacher, client, and administrative feedback data have consistently rated these client-centered, on-site mental health services as highly effective and responsive.

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Counseling Children Who Have Experienced Extreme Stressors

Alexander Leon

PRESENTER: Alexander Leon

This study is an attempt to demonstrate the efficacy of utilizing the elementary school community in a conscious way as a therapeutic-support system for those children who have experienced severe stressors.

Children come to school with a wide variety of psychological needs that can seriously impact upon academic success. Children who have experienced extreme stressors in their lives are not responsive to the brief, solution-focused therapy (brief therapy) that is frequently used. Young children often need to recycle through a tragedy as they go through developmental stages, making the counseling process a long-term approach. In addition, circumstances of the stressor may take away the family support system when it is most needed. School systems that choose to view themselves as a community need to know how to help in these situations.

Using qualitative research methods, I have studied four children who have experienced extreme stressors. The cases selected were chosen because the loss suffered was compounded by the disruption to the support system. The cases were: (a) a kindergarten child whose brother was killed in a traffic accident in the 3rd grade (b) a 4th-grader whose close relationship with her mother was suddenly disrupted when the mother was incarcerated, (c) a 5th-grade child of divorce who underwent a change of custody (its impact on all family members), and (d) a 1st-grader who had been burned as an infant in a house fire. Her injuries included severe scarring on her right leg and no toes remaining on her right foot. She has had several hospitalizations since the fire.

Notes from individual counseling sessions that cover a period of 2-4 years, teacher responses to directed questions, and interviews with parents and children were analyzed to deduce general themes. In the counseling notes we see the child cycling through thoughts of the loss that occurred and future uncertainties. Teachers, while willing to extend themselves for the particular child, varied in their desire to be involved as a supportive environment. Aware of the tendency to "over protect" this was something they wrestled with in their classroom. Generally they felt that they had gained in knowledge about the effects of particular stressors. The significant theme for parents was that counseling and the supportive environment were not something that they would have sought out. In retrospect, the parents were able to see a positive effect upon their child. A theme from my observations was that teachers viewed their participation as positive experiences, furthering their professional development.

Schools define their mission as either narrow (content only) or broad (development of the whole child). Adopting the "wholeness" of the child perspective, one finds stressors and the disruptive forces outside the classroom detrimental to learning. Success in dealing with extreme stressors by adopting a therapeutic-supportive approach might well carry over and produce systemic change in other relationships. By working with difficult situations we are building trusting relationships throughout the learning community.

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Quality of Early Care and Education

Caregiver Training and Classroom Quality in Child Care Centers

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PRESENTER: Margaret R. Burchinal

Early childhood teacher training/education is delivered in different forms, and varies substantially in content, scope, and intensity. Training ranges from short workshops, longer training institutes, to formal education coursework at community colleges or universities. Previous studies, such as those of Michael lamb, clearly indicate that caregivers with more formal education in early childhood provide higher quality child care. Caregiver training in these studies was characterized by the highest level of formal education that the caregiver achieved despite the fact that many caregivers continue to receive other training such as attending workshops or classes after they complete their formal education. In this study, we have attempted to clarify the effects of early childhood training versus formal education.

Data from this study was from the Cost, Quality, and Outcomes Study of Child Care Centers (CQO). In this study of 553 infant, toddler, and preschool center classrooms, we examined the association between classroom quality and both the education and training. The summary variable describing the highest level of formal training had four levels: (a) BA or BS in ECE or related field, (b) AA in ECE or CDA, (c) ECE courses at a college, or (d) no formal educational training. In addition, whether the caregiver reported attending workshops on site at the center, in the community, or at professional meetings was retained for analysis. Two process quality measures were analyzed: (a) the Early Childhood Environment Rating Scale (ECERS; Harms, Clifford, & Cryer, 1998) or the Infant/Toddler Environment Rating Scale (ITERS; Harms, Cryer, & Clifford, 1990) and (b) the Caregiver Interaction Scale (CIS).

Four analyses of covariance were conducted. Included in all models were: (a) the site of data collection (state), (b) the four categories representing highest level of training, (c) whether the classroom met National Association for the Education of Young Children (NAEYC) ratio recommendations, (d) the caregiver's years of experience in child care, and (e) whether the classroom was an infant / toddler or preschool classroom. The first ANCOVA model included these five variables, whereas the next three models added information about other training experiences.

Results indicated that both level of formal education and attending workshops were related to higher child care quality, even after adjusting for state, adult-child ratios, caregiver experience, and type of classroom. The differences in observed quality associated with training were not trivial. Effect sizes associated with BA level training were moderate (ranging from .33 to .54), and those associated with a CDA or AA degree were modest ($d = .29 - .31$). In addition, significantly higher ECERS or ITERS Total scores were observed for caregivers attending workshops at the center ($d = .37$ on the ECERS, $d = .25$ on the CIS), in the community ($d = .24$ on the ECERS, $d = .21$ on the CIS), and at professional meetings ($d = .40$ on the ECERS, $d = .31$ on the CIS).

In conclusion, this large multisite study indicates that both formal college training and informal workshop training are independently related to better quality child care. These findings are encouraging since informal training is a common mechanism used to promote better quality child care. However, replication of these findings in studies that document training, rather than rely on caregiver report, is needed before making public policy recommendations.

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The Impact of Jumpstart for Young Children: The Role of Trained Volunteers in Increasing Young Children's School Readiness Skills

Sunday Taylor

PRESENTERS: Sunday Taylor, Rachel Bragin

The effects of a focused one-to-one intervention program on the development of language, literacy, and social skills in preschool, and how this correlates to early school success and achievement were investigated. Results indicate the efficacy of using volunteers to enhance preschool program quality, and could subsequently stimulate the widespread implementation of programs that incorporate trained volunteers to improve program quality.

(Abstract from program; poster summary not available for publication.)

Classroom Quality: Patterns of Change over Five Years

Martha S. Abbott-Shim, Richard G. Lambert, Frances McCarty, Laura W. VandeWiele

PRESENTERS: Martha S. Abbott-Shim, Laura W. VandeWiele

The purpose of this research study was to analyze the quality of classroom teaching practices in relation to teachers' participation in training and program improvement efforts over a period of 5 years. The study was conducted by the Georgia State University Research Center on Head Start Quality and funded by a 5-year grant from the Administration on Children, Youth, and Families. The Research Center worked in partnership with three Head Start programs in the Southeast to determine the influences on quality and the impact of program quality on children and families. Approximately 190 classrooms and 358 teachers have been included in this study over the 5 years.

Classroom observations were conducted using the *Assessment Profile for Early Childhood Programs: Research Edition II* (Assessment Profile; Abbott-Shim & Sibley, 1998) in the spring of 1996 (Year 1), the fall of 1996 (Year 2), the fall of 1997 (Year 3), and the spring of 2000 (Year 5). Information about the teachers' participation in training experiences was collected each year with the Teacher Demographics Questionnaire and from other Head Start training records. The training experiences include the following: teachers' participation in the Summer Institute (an intensive, 6-day training experience), teachers' participation in Mentor training, and accreditation achieved by the center.

The analysis of classroom quality using the Assessment Profile (Abbot-Shim & Sibley, 1998) shows that all of the scale scores for Years 1, 2, 3, and 5 are in the average range (44.3–59.2). There was an overall improvement on four of the scales: Learning Environment (54.8–57.6), Scheduling (54.9–58.7), Curriculum (44.3–47.0), and Individualizing (51.3–56.9). On the Interacting scale there was a slight improvement (49.6–51.2) and then a slight decrease (51.2–49.4).

In addition, classroom quality was analyzed in relation to the descriptive changes that have taken place for individual teachers over the 5 years. A sample of teachers whose classrooms had been assessed at least three out of the four times ($n = 130$) was selected in order to further examine the relationship between teacher training and changes in classroom quality across time. These teachers were classified into two groups: a group that made gains and a group that did not make gains across the period of time. The relationship between making gains and participation in various training experiences was then analyzed using Chi-square tests. There was a statistically significant ($p < .05$) relationship between Summer Institute attendance and making gains on the Learning Environment, Scheduling, and Individualizing scales of the Assessment Profile (Abbot-Shim & Sibley, 1998). The relationship between Mentor training and the Learning Environment scale was also statistically significant. In addition, there was a statistically significant relationship between center accreditation and making gains on the Curriculum and Individualizing scales of the Assessment Profile (Abbot-Shim & Sibley).

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The Relationship Between Head Start Classroom Quality and Child Preliteracy

Richard G. Lambert, Martha S. Abbott-Shim, Frances McCarty

PRESENTER: Richard G. Lambert

This study examined Head Start children's preliteracy, parents' functional literacy, family demographic characteristics, and the quality of the classroom learning environment. There is considerable evidence from previous child care research that high-quality programs can make a difference in the developmental outcomes of children. This study extends this area of research by looking at the relationship between Head Start classroom quality and children's preliteracy skills.

Head Start classrooms ($n = 190$) were assessed on a variety of quality indicators including class size; adult/child ratio; the quality of the learning environment; and teacher behaviors, education level, and beliefs about developmentally appropriate practices. A stratified random sampling plan was used to select 48 classrooms from a total of 190. We stratified on classroom quality as defined by the total score on the Assessment Profile (Abbott-Shim & Sibley, 1998) and on the population density of the county within which the Head Start center was located. This plan resulted in 12 high-quality and 12 low-quality urban classrooms, along with 12 high-quality and 12 low-quality rural classrooms. From each of these classrooms we randomly selected 5 boys and 5 girls. Forty of the 48 (83.33%) classrooms contained at least five children for whom we were able to collect all child outcomes, the complete teacher and classroom variables, and the parent interview. The resulting sample size of children was 321 from a total sample of 480. Classroom observations using the Assessment Profile (Abbott-Shim & Sibley) were conducted in the fall of 1997. Data collectors were trained and achieved 90% or greater reliability on the classroom quality measure. Training of data collectors for the child and parent measures was conducted in late winter 1998. Data collection occurred from March through May of 1998. Data collectors were trained and practiced administering the assessments before beginning data collection. To control for preexisting child differences the following child level covariates were used: (a) parent K-Fast adult literacy measure (Kaufman & Kaufman, 1994),

(b) whether the parent reported that the child had been identified as having learning difficulties, (c) whether the parent reported the presence of books in the home, (d) mother's education level, (e) household income, (f) maternal depression, and (g) father presence in the home. Child measures were administered outside the classrooms in a quiet space within the Head Start. The parent functional literacy assessment was administered at the Head Start center as well. Hierarchical linear modeling (HLM) was used to test for the association between classroom quality indicators and the class level mean scores on each outcome measure. The classroom quality indicators were: (a) class size, (b) adult/child ratio, (c) the Assessment Profile (Abbott-Shim & Sibley) scale scores, (d) teacher inappropriate beliefs, and (e) teacher education level. Maternal literacy, child learning difficulties, and books in the home were associated with child receptive vocabulary. The class average receptive vocabulary was associated with class size, the teacher's ability to individualize instruction, and the teacher's beliefs about developmentally appropriate practices.

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Modification of Environmental Demands in the Classroom to Improve Coping Effectiveness and Social Skills in Preschool Children Attending Head Start

Margery Szczepanski

PRESENTER: Margery Szczepanski

This Head Start Research Scholars study evaluated the effectiveness of a 12-week intervention program to improve coping effectiveness and social skills in preschool children attending Head Start. The intervention program was derived from the Coping Frame of Reference (Williamson & Szczepanski, 1999), a set of theoretically based practice guidelines for improving coping effectiveness in children. Effective coping was facilitated by creating a goodness of fit in the classroom between environmental demands and the children's ability to manage them. This was accomplished by grading and modifying physical, social, and activity demands so that they were congruent with the developmental capabilities of the children. The intervention program consisted of three components: (a) teacher training in modifying demands in the classroom to promote goodness of fit based on the Coping Frame of Reference (Williamson & Szczepanski) (b) teacher modifications of demands on a daily basis in the classroom, and (c) provision of weekly consultation sessions to teachers by an occupational therapist to collaborate in designing weekly classroom interventions to improve goodness of fit.

Two classrooms of children and their teachers from two Head Start sites participated in the intervention program. The intervention group included thirty-three 3- and 4-year-old predominantly Latino children. Twenty-five children from two additional classrooms participated in the control group. Pretest and posttest comparisons were made between the ratings on intervention and control group participants on the Coping Inventory (Zeitlin, 1985), a measure of coping effectiveness, and the Social Skills Rating System (Gresham & Elliot, 1990). Classroom environments were compared on the Early Childhood Environmental Rating Scale (Harms, Clifford, & Cryer, 1998) prior to and at the completion of the program. Process evaluation included identification of environmental modifications used in the classroom and their frequency of application by the teachers. Although the intervention group children demonstrated greater improvements in both coping and social skills in comparison to the control group, data analysis using repeated measures analysis of variance, did not reveal statistically significant differences in change between the groups. Both intervention classrooms demonstrated important changes in qualities of the classroom environment based on ratings of the Early Childhood Environmental Rating Scale (Harms, et al.) by an independent rater.

Preliminary findings suggest that qualitative change in the classroom environment can be made by modifying physical, social, and activity demands. Additional research is needed to examine the effectiveness of the complete set of guidelines from the Coping Frame of Reference (Williamson & Szczepanski, 1999) in improving preschool children's coping effectiveness and social skills. This poster presentation includes a brief summary of the Coping Frame of Reference (Williamson & Szczepanski) intervention guidelines applied in this study, a description of the intervention activities used by teachers to promote coping with demands in the classroom, and a summary of the data analysis.

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How Much Teacher Direction is Best for Promoting Low-Income Latino Preschoolers' Learning, Motivation, and Private Speech? A Controlled Experiment

Angela Willson-Quayle, Adam Winsler

PRESENTERS: Angela Willson-Quayle, Adam Winsler

In 1994, 10% of Latino youngsters dropped out of school, a rate 2 to 3 times that of Anglo-Americans (U.S. Bureau of the Census, 1996). With Latinos becoming the fastest-growing minority group in this country (U.S. Bureau of the Census, 1990) and the dropout rate showing no signs of abating, there is cause for concern. Early educational interventions, such as Head Start (26% of whose enrollment is made up of Latinos; U.S. Bureau of the Census, 1996) have been shown to make an important difference in the lives of educationally at-risk students (Ramey & Ramey, 1992). However, important questions still remain as to which educational programs best promote learning in ethnically and socioeconomically diverse children. Central to this debate is the amount of structure teachers should impose in early classrooms. Some researchers suggest that low-income and minority students are best served by early childhood programs with high levels of teacher direction and instruction (Gersten, Darch, & Gleason, (1988). Others believe that all children are best served by classrooms that promote child-initiated learning with minimal structure (Schweinhart & Weikart, 1983). Interestingly, Stipek, Feiler, Daniels, & Milburn (1995) found that teacher-directed early classrooms fostered learning, but hindered academic motivation and self-esteem among their ethnically mixed children. They

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also found that classrooms with high levels of child autonomy and minimal teacher structure fostered positive motivational outcomes, but were not as good for promoting academic learning.

With this as a backdrop, the present study explored the effects of three diverse, one-on-one teaching conditions: (a) teacher-directed; (b) scaffolded; and (c) child-centered on the learning (task performance); motivation (affect and persistence); and private speech (i.e., goal-directed self-talk) of low-income, Latino preschoolers. The teaching approaches varied in terms of teacher-imposed structure and control during the construction of a Duplo-Lego model. In the teacher-directed approach, children were exposed to high levels of structure and control allowing for low child autonomy. Those in the open-ended condition experienced low levels of structure and control affording high child autonomy. Children in the scaffolded approach received fluctuating amounts of structure and control contingent on the child's moment-to-moment competence. The major research question of interest was: which of the teaching approaches best promotes children's learning, motivation, and private speech? It was hypothesized that scaffolding would be best for children's learning, motivation, and private speech; teacher-directed instruction would promote learning but hinder motivation and private speech; and child-centered teaching would augment children's motivation and private speech, but be poor at facilitating learning. Sixty, low-income Latino 4- and 5-year-olds attending preschool centers in the Washington, DC metropolitan area participated. Children were randomly assigned to one of the three teaching conditions and videotape data were collected at the preschool sites before, during, and after the one-on-one teaching (dyad) session with the experimenter. Videotapes were reliably coded by blind observers for behavioral measures of motivation (i.e., affect and persistence) and private speech (i.e., task-relevant, task-irrelevant, and partially-internalized as used in Winsler & Diaz; 1995).

The data produced the following mixed results:

1. Children in the scaffolded condition obtained the highest task performance score after the dyad session, those in the structured group the second highest, and those in the child-centered condition the lowest. While children in the scaffolded and structured groups showed increases in performance after working with the experimenter, those in the child-centered condition showed a modest decrease.
2. Children in the scaffolded condition were happiest at the beginning of the posttest performance task, whereas those in the structured group were the least visibly happy.
3. While children in the scaffolded and teacher-directed conditions showed increases in persistence and those in the child-centered group showed decreases, a significant difference was only observed between the scaffolded and child-centered conditions.

Analyses of private speech are ongoing, but so far preliminary results indicate that scaffolding and teacher-directed instruction increase speech in general, including task-relevant and task-irrelevant forms.

In conclusion, scaffolded and teacher-directed instruction are associated with greater benefits than the child-centered approach, although in some cases (fewer than hypothesized) scaffolding proved more beneficial than teacher-directed instruction.

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Early Child Care Experiences and Children's Social Competence Between One and One-Half and Fifteen Years of Age

Jessica J. Campbell, Michael E. Lamb, C. Phillip Hwang

PRESENTER: Jessica J. Campbell

Increasing rates of maternal employment in the last 2 decades have fostered concerns regarding the impact of out-of-home care on children's development. Compared with children in exclusive parental care, children in out-of-home care settings experience more and different kinds of interactions with larger and more diverse arrays of peers and adults, and there has been intense interest in the effects of these experiences (Lamb, 1998). The primary purpose of the present longitudinal study was to examine the effects of early child care experiences on children's social development between 1.5 and 15 years of age.

Participants in this study included 52 Swedish children (31 boys) and their families, a subsample of the140 families participating in the Goteborg Child Care Study (GCCS). Children were included in the GCCS if they were (a) between 12 and 24 months old, (b) firstborn, (c) living with both parents, and (d) not attending regular day care at the time of recruitment. Mean Hollingshead (1995) scores for mothers and fathers were 41.1 and 43.5, respectively. Subjects were divided into three groups: (a) center day care ($n = 53$), (b) family day care ($n = 33$), and (c) home care ($n = 54$). Of the families initially recruited, 52 participated in all six phases of the study and had their children continuously enrolled in alternative care through 40 months of age. These 52 families are the focus of the current report.

After agreeing to participate in the study, families were visited in their homes by a member of the research staff. During this visit parents were interviewed about their education, occupations, and their planned use of alternative care arrangements. A second visit was then arranged during which the quality of home care was assessed using Caldwell's (1970) HOME Inventory. Six weeks later, a member of the research staff visited the children's alternative care facilities and sampled the quality of care using Belsky and Walker's (1980) checklist. The children were also observed interacting for 30 minutes with their peers.

One and 2 years later, home environments and out-of-home-care facilities were reassessed and children's social behavior with peers was observed. In addition, care providers were interviewed regarding characteristics of the facility and children's care arrangements. When children were 6.5 years, researchers again visited alternative care facilities to observe children interacting with their peers for 30 minutes. During this visit, care providers were also asked to describe the children's social skills using Baumrind's (1968) Preschool Behavior Q-Sort. When the children averaged 8.5 years, their second-grade teachers' perceptions of their social behaviors were recorded using the questionnaire developed by Andersson (1989). At 15 years, participants completed Parker and Asher's (1989) Friendship Quality Questionnaire (FQQ) and Buhrmester's (1990) Social Style Questionnaire (SSQ).

This study is among the first to examine the associations among children's early home and out-of-home experiences and children's social competence over a 14-year period. Overall, our results suggest that social competence with peers, as observed in out-of-home care settings, begins to stabilize at around 3.5 years of age. Prior to this age, the amount of time spent in out-of-home care and the quality of early home and out-of-home care may play an important role in shaping children's social skills. Thus, early child care experiences may indeed influence social competence, fostering individual differences that remain stable through childhood and adolescence.

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Characteristics of Early Childhood Settings in the US: How Does Head Start Compare?

Jeanne E. Montie, Sherri L. Oden, Patricia P. Olmsted, Jill Claxton

PRESENTERS: Jeanne E. Montie, Sherri L. Oden

This study presents descriptive findings related to the quality of preprimary educational and care settings in a carefully drawn national sample, as well as background information on the families and children served. The data were collected as part of the International Association for the Evaluation of Education Achievement (IEA) Preprimary Project, sponsored by the IEA. Data were collected in early child care and education settings in the US and 14 other countries using direct observations systems, child developmental status measures, and parent and provider questionnaires. The measures used in the study were developed by an international team of early childhood experts specifically for the IEA Preprimary study. This study reports on selected US findings from the parent and provider questionnaires and the child developmental status measures.

Five types of settings were included in the data collection: (a) Head Start programs, (b) public preschool programs, (c) other organized group settings (preschools and child care centers), (d) family day care homes, and (e) children's own homes. Data collection took place at six sites around the US that varied in geographic location and degree of urbanization, and together the six sites included families from all major cultural/ethnic and socioeconomic groups. The final sample consisted of 559 children: 109 children enrolled in 31 Head Start programs, 107 children attending 24 public preschool programs, 193 children in 45 other types of organized programs, 71 children in 32 family day care homes, and 79 children cared for in their own homes.

The major portion of the data was collected during 1 calendar year; mean age of the children at time of data collection was 4.5 years (*SD* = .29). Findings are presented in four areas: (a) family background (e.g., parent's education, income level, marital status), (b) children's developmental status (cognitive, language, fine-motor, social competence, preacademic), (c) teacher characteristics (e.g., education, experience, certification), and (d) setting characteristics (e.g., group size, staff/child ratio, hours of operation, parent involvement).

The analysis and resultant findings allow us to look at the background characteristics of the populations using each type of setting in light of the resources provided by the settings. We explore questions related to potential needs of the diverse families being served (e.g., low-income families, families with different educational levels, children with different developmental needs) and ways in which the different types of settings may or may not be meeting those needs. The findings are relevant to directives from the recent Head Start Reauthorization Act calling for programs to assess their effectiveness in serving children and families. In a later stage of the IEA Preprimary study the findings will be related to child outcomes at age 7, allowing us to explore models incorporating family, setting, and teacher characteristics to predict long-term outcomes for children.

Satisfaction with Early Childhood Services Among Low-Income Families in a Rural County

Jane K. Teleki, Sherry Buck-Gomez

PRESENTER: Jane K. Teleki

A component of evaluation for center-based early childhood programs is parent satisfaction. The current study addressed three questions: (a) What is the overall level of parent satisfaction with services? (b) With which dimensions of service are parents most and least satisfied? (c) Do parents of children in child care centers differ in their level of satisfaction from those whose children are in early education programs?

The population consisted of parents in a rural county who had at least one child less than 5 years of age enrolled in a center-based early childhood program in that county between August 1997 and May 1998. A random sample of 100 families (50 from child care and 50 from early education) was selected for the study.

The Parent Questionnaire (National Association for the Education of Young Children; NAEYC; 1991) was modified so that parents responded to the 20 statements on a 5-point Likert scale ranging from strongly agree (5) to strongly disagree (1). Envelopes containing a letter (explaining the study and requesting parents' participation), a copy of the questionnaire, and a postage paid envelope addressed to the researcher were distributed by program directors to parents who had been randomly selected to participate. Parents or guardians returned completed questionnaires to the researcher in the postage paid envelopes.

Of the 100 questionnaires distributed, 65 were returned: 28 (56%) from child care programs and 37 (74%) from early education programs. Respondents' ages ranged from 17 to 48 years (*m* = 28.6). The majority of participants were single (52.3%), African American (67.7%), females (92.3%) with annual incomes below $20,000. Most were high school graduates (78.5%) and about one half had some college. Most had one or two children (67.7%) whose ages ranged from 4 to 60 months (*m* = 39.7). Differences between types of programs (child care versus early education) were found for ethnic origin, number of children, and child's age.

Overall level of satisfaction was assessed by responses to item #16 (I am satisfied with the care and education my child receives in this program) and by looking at the range of scores for all items. On a scale from 1 to 5, mean responses to item 16 were 4.64 for child care and 4.37 for early education. Mean scores for individual items ranged from 3.85 to 4.64 for child care and from 3.94 to 4.62 for early education.

To determine the dimensions with which parents were most and least satisfied, items were ordered according to mean responses for each item. For child care, the highest mean (4.64) occurred for three items: (a) #5 (Parents are welcome visitors in the program at all times); (b) #15, (I feel that the teachers have a good attitude toward me and my child); and (c) #16 (Personally, I am satisfied with the care and education my child receives in this program). The lowest mean (3.85) was for item #1e (The program gives information to parents about menus of meals and snacks given to children). For early education, the highest mean (4.62) was for item #7 (The program informs parents about day-to-day happenings and special events such as field trips that affect children). The lowest mean (3.94) was for item #1e (... information ... about menus of meals and snacks given to children).

A *t*-test was used to examine whether or not parent satisfaction differed between the two groups. Mean scores for overall satisfaction were 4.32 for child care respondents and 4.36 for early education respondents ($t = .20$; $p = .840$). For individual items, the only one for which the difference was statistically significant was #1b (The program gives information to parents about payments and refunds).

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Children's Developing Conceptions of School and Expectations for Kindergarten: The Influence of Preschool Curriculum

Karen L. Murphy, Elisa L. Klein

PRESENTERS: Karen L. Murphy, Elisa L. Klein

As part of a larger multiple-method research program on children's conceptions of the transition to kindergarten, this qualitative study followed the children in six classrooms through their preschool year as they worked to construct conceptions of themselves as students in settings with very different curriculum focuses. Three child-centered and three academic programs were chosen to participate in the research. Curriculum focus was determined through the use of the Classroom Practices Inventory (CPI; Hyson, Hirsh-Pasek, & Rescorla, 1990). Data were collected through the use of classroom observations, as well as interviews with children, teachers, and parents. It became apparent in the course of the research that there are many influences at work that have an impact on children's views of their roles as students in preschool classrooms, and that these factors inform their expectations for kindergarten.

Several dimensions emerged from the data that serve to describe classroom practices and draw distinctions between the child-centered and academic groups. Three distinct aspects of the learning environment were identified that provided messages for children about what to expect from school settings. The first is the role of play and structured activities in the curriculum. Through reviewing field notes it became apparent that the vast majority of instructional activities were play based in the child-centered classrooms. In contrast, teachers in academic programs seemed to view play as an extra or noncritical component of their curriculum, using play more as a way to keep children occupied while they prepared materials or did academic activities with small groups of children than as a meaningful activity in its own right.

The second aspect of the learning environment was how academic knowledge and experiences were offered to children. Both types of programs mentioned some academic concept knowledge, such as letter recognition and counting, as part of their goals for children. Teachers in child-centered classrooms reported that these concepts were taught through everyday interactions and play-based activities, while teacher-directed academic activities were the main way children were exposed to these concepts in academic programs.

The third major difference between the two types of classroom was the use of public evaluation of children's work and behavior in the three academic programs.

Differences were also apparent in the roles assigned to children in these classrooms. In academic classrooms, children were encouraged to follow directions and get their work done. In contrast, children in child-centered classrooms were encouraged to be decision makers and problem solvers, taking an active role in guiding their own experiences in the classroom.

Finally, possibly the most explicit influences on children's expectations for future schooling are direct verbal messages from teachers about school expectations and what kindergarten will be like. Teachers in academic programs provided children with explicit verbal messages about what was expected from them in school and what kindergarten would be like, which were not observed in child-centered classrooms.

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The Impact of Developmentally Appropriate Classroom Practices on Low-Income Minority Children's Social Competence Skills

Roline Milfort, Daryl B. Greenfield

PRESENTER: Roline Milfort

This study sought to determine the relationship between developmentally appropriate practices (DAP) in the classroom and children's social competence with peers in a sample of low-income African American and Latino preschool children attending Head Start. The National Association for the Education of Young Children (NAEYC) has encouraged the use of developmentally appropriate practices in early childhood classrooms to promote children's overall development including social competence (Bredekamp, 1997; Bredekamp, 1987). Also, since children from low-income families exhibit a range of social competencies in preschool (Garner, Jones, & Miner, 1994), we sought to obtain descriptive data on children's play interaction, disruption, and disconnection in the context of peer play. Differences between the two ethnic and gender groups were also examined. It was hypothesized that developmentally appropriate practices create a classroom environment that promotes children's social competence and would thus account for differences in children's social competence skills between classrooms varying in DAP.

The sample consisted of 150 children (73 girls and 77 boys) from 14 Head Start classrooms in three Head Start centers. Seventy-four children (49.3%) were African American and 76 (50.7%) were Latino. The head teachers rated randomly selected children's social competence with peers using the teacher version of the Penn Interactive Peer Play Scale (PIPPS; Fantuzzo, et al., 1995). The classroom environment assessments were conducted by a graduate research assistant using A Developmentally Appropriate Practice Template (ADAPT; Gottlieb, 1995). The graduate research assistant conducted classroom observations over a period of 2–3 days; 3 hours per day.

Results of the study found significant variability in children's disruption, disconnection, and play interaction both within and between classrooms. African American children were rated significantly higher in both disruption and play interaction than Latino children. Boys were rated higher in disruption than girls, and girls were rated higher in play interaction than boys. No significant group differences were found in disconnection ratings.

Hierarchical linear modeling (HLM; Bryk & Raudenbush, 1992) was used to formulate and test hypotheses regarding predictors of children's social competencies at the child level (ethnicity and gender) and the classroom level (DAP). In the combined models, ethnicity and gender were significant predictors of disruption and gender was a significant predictor of play interaction. Further research may be necessary to explore the pathways and causes of these gender and ethnic differences in order to develop effective classroom practices and intervention strategies that are beneficial for boys, girls, and diverse ethnic populations. Developmentally appropriate practice was a significant predictor of classroom disruption and approached significance in predicting disconnection.

These findings suggest that a developmentally appropriate classroom curriculum may be one of the ways to prevent disruptive behaviors in the classroom setting. However, additional efforts may be necessary to lure some shy and withdrawn children into play activities. Nonetheless, though decreasing behavior problems continues to be a major concern and focus of intervention efforts, promoting children's prosocial skills and positive peer relationships is also important since the absence of problem behaviors does not imply social competence skills.

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Research Partnerships With Communities

Joining Forces: A Researcher-Practitioner Partnership for a Head Start Local Impact Study

Mary Marx, Lawrence Johnson, Rebecca McBroom, Sharon Cochran, Marge Stillwell

PRESENTERS: Mary Marx, Lawrence Johnson, Rebecca McBroom,
Sharon Cochran, Marge Stillwell

The Advisory Committee on Head Start Quality and Expansion (U. S. Depart. of Health and Human Services, 1993) promoted the role of research in Head Start practice and encouraged creation of researcher-practitioner partnerships. Administrative staff from a Midwestern school district's Head Start program collaborated with evaluation staff, and with training and technical assistance staff from three universities to design and carry out a local follow-up study. The partnership is the topic of this presentation.

During 1998 and 1999, parents and guardians of 19, 3rd- grade students who had been in the Head Start program and who were considered "successful" were interviewed for this study. Success was defined as having scored at or above the 50th percentile on the Iowa Test of Basic Skills standardized test administered during 3rd grade. The purpose of the study was to identify attitudes and practices seen as contributing to a successful school experience.

As background to the study, program staff had been grappling with the idea of increasing the academic focus of the curriculum so that children attending the program could go into kindergarten "knowing more." The program's overall goal was to increase the number of 3rd- graders who could meet the study's definition of success. Program staff wanted to maximize the time they had with the children. At the same time, staff was thinking, "How much impact will we have here if there is no follow through with parents at home?"

Rating responses from the 1st year strongly supported three study domains for parent-child interactions related to at-home learning: (a) especially literacy, (b) family and child routines and responsibilities, and (c) family connections to the community. The program incorporated findings into the family partnership agreements. Rating responses from 2nd- year interviews tended to be lower, however, overall ratings appeared to support the three study domains.

Due to small sample size, it was difficult to interpret differences between Year 1 and Year 2 data, and to know if the two groups represented a homogenous parent population. It was also unknown whether parents of "successful" and not so "successful" children were from the same population. To address these issues, partners decided to increase sample size in Year 3 and to redesign the study to include a group of randomly selected "typical" parents to serve as a comparison group in Year 3.

The study's potential, "even though small," was seen as supporting the three domains: (a) at-home literacy activities for children and parents, (b) routines and responsibilities, and (c) connections to the community. The team believed the domains offered a view of what the home should look like to support a child's successful school experience.

Program staff used the study domains to develop a self-assessment tool. They attempted to raise awareness of the domains through the family partnership agreement process, a process that involved goal-setting activities with parents and follow-up to track achievement of parents' goals.

Program staff also used the study to enhance program services. To prompt parents to interact with children at home, transition packets were developed and sent home monthly. The packets included activities built around the letter of the month, and science and math concepts that reinforced what children were being taught in school. Among reasons parents responded favorably to the packets were these: (a) the transition packets increased learning for both the child in the program and for other siblings, and (b) the transition packets increased parent-child interactions related to at-home literacy and numeracy activities.

The researcher-practitioner partnership enhanced study quality. Head Start staff identified and contacted families. They also brought to the table a desire to undertake the study, courage to take an honest look at what was happening, and willingness to make changes based on study findings. T/TA staff matched up partners for the collaboration, kept communication open, and supplemented resources for the study. The evaluation partner provided technical expertise in terms of research design, data analysis, and reporting. All of the partners wanted Head Start children to succeed and all were interested in broader practice implications.

Although the sample was small, the study has the potential to demonstrate important results. It retains a focus on parents as a primary link in supporting their children's education. "When parents and children learn together, increased appreciation and respect for education within the family paves the way for adjustment to and success in school" (Head Start Family Literacy Project, 2000, p. 16).

Comparison of attitudes and practices of "typical" versus "successful" parents should add to our understanding. It should confirm if the three domains are on track and should provide strong rationale for putting resources towards promoting them.

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The Early Head Start Evaluation and Continuous Improvement Plan: A Program Initiated Research Partnership to Improve the Quality of Early Head Start

David A. Caruso, Diane Horm-Wingerd, Julianna C. Golas

PRESENTERS: David A. Caruso, Diane Horm-Wingerd, Julianna C. Golas, Lynda J. Dickinson

In its ongoing effort to enhance the quality of services for children and families, Head Start has emphasized the power of partnerships between Head Start grantees and university researchers to achieve its goal of quality. The Early Head Start Evaluation and Continuous Improvement Plan (EHS Plan) is an example of the work produced by a successful partnership between a Head Start grantee in Rhode Island and a university research team. The EHS Plan focuses on the very early development of children participating in Early Head Start, as well as the program and family contexts in which these children are developing.

The EHS Plan was designed to provide a systematic approach to collecting and analyzing information about the Early Head Start program in order to support an ongoing effort to improve the effectiveness of services for children and families. The EHS Plan focuses on the overlapping areas of program management, training and technical assistance, and program evaluation in the four cornerstones of Early Head Start: (a) Child Development, (b) Family

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Development, (c) Community Building, and (d) Staff Development. The results of this evaluation activity help to answer questions about effective and ineffective services, practices, and programming approaches through planned feedback for program development and revision.

From the beginning, the design of the EHS Plan followed a Community Collaborative, Co-Learning Approach (Ostrom, Lerner, & Freel, 1995). A basic tenet of this approach is the necessity of forming an equal partnership between the evaluators and Head Start staff that leads to true collaboration in the conception, design, and implementation of an evaluation study. The collaboration enables the joint formulation of meaningful questions and determination of appropriate methods; both parties contribute their expertise and unique strengths to the design and implementation of the study (Denner, Cooper, Lopez, & Dunbar, 1999). Ostrom et al. (1995) report that such an approach enhances cooperation and interest of the "evaluated" and greatly increases the likelihood that the results will be meaningful and used.

Following the Collaborative, Co-Learning Model, the initial activity of the partnership was to collaborate in refining program goals, developing and choosing evaluation questions that were important, identifying outcome measures that were meaningful and valid, and developing support for the evaluation project among the varied constituent groups (staff, parents, Policy Council, etc.). The EHS Plan uses a multi-variable, multi-system, and contextual research design. Data collection strategies include records review, questionnaires for staff and families, observation, and interviews. This approach to evaluation ensures that the outcomes inform and modify future service delivery (McKillip, 1987). The EHS Plan focuses on three major areas: (a) assessment of progress towards objectives, (b) collection of qualitative information on families, and (c) documentation on program management.

As Head Start continues to evolve so do the challenges that accompany assessment and evaluation of the varying programs and models. Evaluation plans that can accurately assess all the multiple components of Head Start will be needed as Head Start transitions into the next century. The EHS Plan is a model design that can meet the growing needs of Head Start.

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Continuous Improvement Evaluation in Phoenix Early Head Start: Lessons for Staff Development

Linda Sandler, Robert F. Weigand

PRESENTERS: Linda Sandler, Robert F. Weigand

For the past 5 years, Southwest Human Development (manager of Phoenix Early Head Start) and the Morrison Institute for Public Policy at Arizona State University have been engaged in a collaborative, continuous improvement evaluation of the Phoenix Early Head Start program. The evaluation is designed to examine the effectiveness of program components, identify successes and challenges in achieving program objectives, and most importantly, provide program managers with ongoing feedback in a timely fashion.

Staff development has been an important focus of the evaluation. This presentation uses staff development as the subtext to examine how continuous program improvement evaluation is working in Phoenix Early Head Start.

The nature and quality of staff training has been identified as an important factor contributing to the effectiveness of early intervention programs serving families with very young children (Jerald, 1997; Advisory Committee on Services for Families with Infants and Toddlers, 1994). Knowledge and skill in two areas in particular have been identified: (a) knowledge of early childhood development and parent-child relationships (Schrag Fenichel & Eggbeer, 1990; Roberts, Wasik, Casto, & Ramey, 1991), and (b) the knowledge and skills necessary to establish effective working alliances with families (Schrag Fenichel & Eggbeer, 1990; Roberts, et al., 1991; Berlin, O'Neal, & Brookes-Gunn, 1998).

Program managers and evaluators developed a "staff video-clip analysis" to gauge how staff implement what they've learned with families. Staff watch videotapes of mother-child dyads at two different stages of child development. They are asked to identify both strengths and concerns regarding the child's development and parent-child interactions, and indicate how they would use this information in their work with the family.

Results of the 1998 video-clip analysis identified gaps in staff knowledge and skills, and highlighted specific areas warranting attention. Program managers responded to the evaluation feedback by implementing an expanded training agenda in child development and parent-child relationships.

Following implementation of the new training agenda, the video-clip analysis was administered again in 1999. Comparison of the 1998 and 1999 scores indicated mixed results on the effects of the staff training. While staff demonstrated higher-level understanding of some concepts, a number of concepts remained elusive and difficult to apply to actual observations of parent-child interactions. Data analysis suggested a need for consensus among program administrators, managers, and supervisors about the concepts, definitions, and applications relevant to work with children and families, so that everyone uses them consistently as part of the daily program dialogue.

In response to the 1999 evaluation findings, administrators established an agency-wide Child Study Group for program managers and supervisors of child development staff. This group has identified a core of theoretical and conceptual issues that are becoming the basis for a common conceptual language and a blueprint for child development training throughout the agency. The Child Study Group is also providing additional training in child development and parent-child relationships to the program managers and supervisors. The intention is to ensure that the theoretical and conceptual issues that are the focus of the staff's child development training are consistent with the issues that form the theoretical and conceptual foundation for staff supervision.

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Examining the Relationship Between Researchers and Head Start Practitioners

Carol L. Howard, Corrine Lewkowicz, Colleen Dodi

PRESENTERS: Carol L. Howard, Corrine Lewkowicz

Educational researchers are beginning to take a closer look at how the results of their research are being used by policy makers and practitioners. While policy makers regularly use research to inform their work, educational research has not had the same impact on teachers and their supervisors. To better understand this disparity, a deeper look at the researcher-practitioner relationship is need. Interest in understanding this relationship has captured the attention of researchers as well as decision-makers. For example, *Head Start Dialogue* recently issued a call for papers on the subject of Community-University Research Partnerships.

Head Start has demonstrated its commitment to this issue in a number of ways: (a) by funding the Head Start-University Partnership grants, which facilitates programs' participation in research activities, and (b) by forming a National Head Start Association Research and Evaluation division. The Administration for Children and Families also showed its commitment by funding four Head Start Quality Research Centers (QRCs) in 1995. The goal of the QRCs has been to work with Head Start programs to identify indicators of quality and ways to measure those indicators. The New England QRC, led by Education Development Center, Inc. (EDC), has developed research partnerships with five Head Start programs in Massachusetts.

This paper tells the story of the relationship between the New England QRC and one of their Head Start program partners, Communities United (CUI). It presents both the researchers' and practitioners' views about the barriers and supports to developing and sustaining a mutually beneficial relationship. This paper address such issues as overcoming challenges to communication, dealing with issues of confidentiality, and setting and working towards mutually accepted goals. In addition, the authors discuss implications for planning and carrying out research activities as well as analyzing and sharing findings in a way that is useful to the community of researchers as well as practitioners.

Evaluation of a Home-Based Early Head Start Program: A Community-University Partnership in Progress

Lucy H. Seabrook, Nancy Secor, Hiram E. Fitzgerald

PRESENTER: Lucy H. Seabrook

An important element of serving high-risk families is tailoring services to meet their unique needs. Well-established theories presented by Bronfenbrenner (1986; 1992), Belsky (1984; 1993), and Cicchetti and colleagues (1981; 1995) have focused on the importance of considering multiple levels of causation in context of family functioning. These models emphasize an understanding of the complex transactions among risk factors at the level of the child, the parent, the family structure, the family economy, the community, and larger society. By nature of the target population served, Early Head Start (EHS) families may be at particular risk for poor outcomes: their family contexts may be characterized by multiple levels of risk. This study describes risk characteristics for 150 children served by a mid-Michigan EHS program. Where possible, comparisons of this sample with other cross-national EHS samples are presented. Each of four counties served is described regarding community-level risk factors of low birth weight, births per maternal age, poverty, prenatal care, and teen pregnancy. Family-level risk is assessed via single (48.7%) or teenage (41.3%) parenting, residential instability (7.3%), parental/sibling loss by death/divorce (26.7%), history of diagnosed family problems (21.3%), housing in rural/segregated area (26.0%), high density (17.3%), unemployed parent(s) (72.7%), and low family income (92.7%). Parental risk is presented regarding destructive temperament (16.7%), chronic illness (physical or emotional) (8.0-24.0%), diagnosed handicapping conditions (7.3%), physical/sexual abuse and neglect (17.3%), substance abuse/addiction (13.3%), language deficiency or immaturity (16.0%), limited English speaking household (3.3%), history of low school achievement (32.0-54.0%), history of delinquency (16.7%), or incarceration (9.3%). Families' needs are also described regarding child care, heath care coverage, employment, and housing. Child-level risk is assessed via low birth weight (15.3%), developmental immaturity (10.7%), and nutritional deficit (14.0%).

In meeting the goal to establish individually tailored approaches to interventions with such high-risk families, the perspectives of those families must be considered. As such, this study also examines parental perceptions of how the program has helped them, goals established for children/parents, and feedback provided for the program. Parents emphasized the importance of the relationships with their Home Visitor (HV), including feeling respected by and comfortable with the HV, having children feel comfortable around the HV, having a HV who is open-minded to the needs of the family, and having a HV who both listens and gives suggestions. Illustrative parental responses to open-ended questions are presented (e.g., "My children really enjoy the home visitors…they don't even know that some of the activities are educational and that they are being tested"; "It's nice to have someone knowledgeable when I have questions or doubts"). In addition, parents provided information about the best part of their participation in the program, including help with child/parenting information (69.2%), adult companionship (23.1%), one-on-one attention for child (20.5%), convenience of home setting (12.8%), "everything" (15.4%), and time spent as family (5.1%).

The initial findings presented here represent the first phase of assessment in this ongoing evaluation project. Findings are discussed in terms of how family support and child development programs like Early Head Start can tailor interventions based on family risk levels.

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Structural and Process Features of a University-Head Start-Private Vendor Partnership

Michael F. Kelley

PRESENTER: Michael F. Kelley

In the most recent reauthorization legislation for Head Start, a significant policy thrust has emerged for the creation of partnerships and collaboration among Head Start grantees and the private sector. With the advent of welfare reform and the growing transition of low-income parents to work, one of the major goals of this policy push is to meet the changing, demographic needs of those families who require full-day early care and education for their children. To meet these needs, segments of the field of early care and education have undergone dramatic restructuring with a focus on collaborative models of service integration (Kelley, 1996). Currently, little is known about the structural and process features that forecast success with Head Start programs and private entity partnerships. Moreover, our knowledge base is limited in terms of the context tensions and barriers that inhibit fully integrated full-day service delivery within these partnerships (Kirk & Kelley, 1996).

Using a mixed methods data gathering process of retrospective reviews, document analyses, semi-structured interviews, and observations this ethnographic study reports on a university-Head Start-private business partnership that integrates Head Start children into full-day, National Association for the Education of Young Children (NAEYC) accredited early education classrooms. The 20 Head Start children are fully integrated into the mainstream of four separate classrooms with 40 same-aged, middle class peers, rather than residing in traditional, stand alone Head Start classrooms. Twenty-four key personnel involved in the delivery of services served as data sources during this 6-month study. Several structural and process features were examined based on an operational framework of collaboration proposed by Kagan (1991). Additionally, the theories of action held by the different people (Hatch, 1998) as well as tensions and barriers to collaboration are examined and reported using Bronfenbrenner's ecological model (Bronfenbrenner, 1979) as a conceptual framework for portraying the data obtained.

Results of this study indicate that multiple partner collaboration is a difficult human enterprise, particularly when new operational procedures (fully integrating Head Start children into the mainstream of classrooms) are instituted that conflict with historical ways of doing business. Program operational difficulties were most evident at the mesosystem level. These difficulties arose over role and rule interpretation by the Head Start case management service provider, coordinators, and the center director. At this level, traditional Head Start service provider roles ("we only serve Head Start children!") clashed with the private program mission of serving all children and families, regardless of economic status. The operating "theory in use" for many Head Start personnel appears rooted in their own backgrounds linked to Head Start and its history. Since many of these individuals moved up through the Head Start system with its perceived rules and regulations, it is very difficult to expect these personnel to reinterpret or bend the system features. This is a challenge to programs that hope to partner with Head Start and offer fully integrated full-day education and services to all children and families. Possible answers lie in professional development experiences that examine how multiple personal theories of action influence program functioning and cross-role training for all personnel from each entity participating in the partnership.

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Practitioner and Research Partners Building Evaluation Capacity for Data-Driven Decision Making

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In this era of accountability and welfare reform, Head Start professionals are called upon to strategically serve their clients. In a draft report about changes to the National Head Start Training and Technical Assistance (T/TA) System, the Administration for Children and Families noted the current system had "insufficient evaluations at all levels" (Sherman, Deich, & Webb, 1996, pg. 3). This poster presentation highlights a practitioner/researcher partnership formed to conduct state-of-the-art evaluation activities related to Head Start T/TA efforts. Using a participatory approach, the partnership focuses on evaluation capacity building and a commitment to using data to drive decisions.

In 1997–98 two practitioners partnered with the University of Cincinnati Evaluation Services Center (UC-ESC). The partners were: (a) Region Va Head Start Quality Network (Q-Net), headquartered in a Wisconsin Cooperative Educational Services Agency and serving grantees (Head Start and Early Head Start) in Minnesota, Wisconsin, and Michigan; and (b) Region Vb Q-Net operated by the Ohio State University and serving grantees in Illinois, Indiana, and Ohio.

Garnering university resources, especially from the College of Education, UC-ESC assists organizations with program evaluation needs (Zorn et al., 1998). An important affiliate, the Arlitt Child and Family Research and Education Center, offers expertise related to the Head Start program it houses and other early care and education research initiatives. UC-ESC basic tenets include valuing of children, families, and communities, and the empowerment of those who provide services to improve conditions for those groups. "At the same time, we value accountability and believe that valid and reliable data provide the basis for establishing systems of services that are accountable" (Zorn & Johnson, 1997).

Each Q-Net evaluation proposal addressed a process component (intended to establish an internal feedback loop for continuous quality improvement), an outcome component (intended to focus on impacts of various T/TA initiatives), and an evaluation capacity-building component for staff and grantees (Johnson, 1988).

This poster presentation showcases evaluation initiatives and shows how the practitioners used study data to make programmatic decisions. At the regional level, a six-state strategic planning evaluation is highlighted, as well as its key finding related to the need for consistent facilitation. The presentation also highlights a common approach for individual state evaluations of Early Childhood Professional Development and demonstrates each state's unique use of evaluation results. Last, an outcome evaluation content activity will highlight capacity building for T/TA staff and the Head Start field at large.

At this critical phase in the Head Start T/TA cooperative agreements (half way through the

5-year period), the Q-Net partners plan to shift from a formative to a summative evaluation focus. The outcomes initiative will aid the shift.

Head Start's T/TA system was cited as reflecting "a national commitment to quality improvement, local capacity building, and ongoing evaluation" (U.S. Depart. of Health and Human Services, 1998, pg. 6). We believe our partnership is an effective model for providing data for decision-makers, for building local evaluation capacity, and for contributing to quality outcomes for low-income children and families. By sharing our experience we hope to spark interest for other Head Start colleagues embarking on a similar journey.

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School Readiness

Head Start on Science and Communication: Ensuring That All Children Start School Ready to Learn

Penny L. Hammrich, Evelyn R. Klein, Stefanie Bloom, Anika Ragins

PRESENTERS: Penny L. Hammrich, Evelyn R. Klein

There is a substantial research base demonstrating that many children can succeed in environments that are specially structured to ensure that appropriate supports are available and that incapacitating barriers are eliminated or circumvented. Keeping this research base in mind, the program was initiated and developed. The original intent of the Head Start on Science and Communication program was to develop a science program for Head Start children that would not only foster their knowledge in science, but also facilitate an avenue for language development.

Phase I of the program included a summer training institute providing hands-on instruction and learning opportunities for 18 teachers, 11 teaching assistants, and 10 parents for Head Start programs from 18 schools throughout Philadelphia and New Jersey. Thirty-nine adult participants attended the summer institute providing hands-on experiences, follow-up technical assistance in the classrooms, and opportunities to enrich instruction from community-based science centers and museums.

Because of the success of Phase I, the program was expanded to Phase II, from preschool age children to those in the early elementary years. In addition to professional development, the goal is to provide enhanced learning through curriculum experiments for young children. Phase II of the program is an inquiry-based science education program incorporating National Science benchmarks for students in kindergarten to 2nd grade. The program aims to create a science-rich learning environment, emphasizing various levels of questioning to broaden young children's knowledge in life science, earth science, and physical science. Students acquire basic concepts and skills for expanding scientific inquiry. Students also benefit from explicit, teacher-led demonstration activities as well as from exploratory, teacher-facilitated activities. Science learning is often dependent on students' abilities to comprehend new vocabulary and concepts. Developing appropriate language proficiency and literacy have been critical issues behind expanding the content knowledge with the program.

The three objectives of the program include: (a) broadening participants' science knowledge around three science domains—life, earth, and physical sciences; (b) enhancing participants' ability to use an inquiry approach to learning; and (c) integrating the program with the core curriculum learning experiences.

Outcomes of Phase I of the program included positive changes in teachers questioning strategies, classroom interactions, and classroom focus. Teachers tended to move from giving away answers to students to using questioning to encourage problem solving. The classroom interactions became more collaborative in focus with students engaging in small group problem solving with verbal interactions among teachers and students. The classroom focus became inquiry-based with teachers asking more open-ended questions.

Phase II of the program is being piloted in 1st grade classrooms in four schools in Washington, DC.

Phase III of the program is an extension of the development work for the Head Start Science and Communication program to include students in grades 3 through 5.

Success by Six: A Community Change Model for Enhancing School Readiness

Marie A. Rumenapp, Kathleen Bappert, Angela Deal, Hiram E. Fitzgerald, Linda George

PRESENTER: Hiram E. Fitzgerald

A "Birth to Six" work group was established by the Branch County Family Services Network in 1996 and generated a vision and set of objectives for children and families in the county. The vision was to develop a system where "Every Child in Branch County Enters School Healthy, Happy, and Ready to Learn." This vision translated into eight specific objectives: (a) Promote Easy Access to Information and Services, (b) Provide Parents with Information and Support, (c) Support Providers of Supplemental Child Care Settings, (d) Support Family-Friendly Employment Practices, (e) Support Family with Family-Centered Services, (f) Support Single Source Integrative Planning, (g) Support Access to Medical and Dental Home, and (h) Improve Economic Resources of the Family. The overarching goal was to develop a system of services that would be family focused and child oriented, that would enhance child well-being and development during the first 5 years of life, and that would prepare children more effectively to be school ready. A Success by Six action plan was adopted in 1998, the same year that Michigan State University linked to the project as evaluator.

In April 1999 the Success by Six workgroup participated in a training session on the Outcomes-Asset-Impact-Model (OAIM) of community change (Brown & Reed, 1998/99) and began the process of developing logic models to guide the county-wide intervention. In addition to the OAIM model, the Success by Six work group effort is guided by two strategies identified by Foster-Fishman, Salem, Allen, and Fahrbach (1999) that seem to be key components of efforts to reorganize human service systems: (a) a responsive system that has interagency collaboration with a seamless delivery system that is functionally integrated and minimizes organizational boundaries, allowing clients to move freely between agencies, and facilitates sharing of information between service providers; (b) a service delivery system that is strength based and family centered, and that emphasizes consumer competencies and builds on existing strengths.

To date, 96 children have been entered into the Success by Six data base. Of these, 55% are children with single parents, 31% have married parents, 4% have parents who are separated or divorced (10% of parents did not provide information on marital status). Seventy-eight percent of the sample is White, 3% is Latino, 8.3% listed Other, and 10% did not provide information on ethnicity. Family risk factors for159 families currently involved with Success by Six include: (a) serious concerns expressed by parent or professional (66%), (b) low income (62.3%), (c) history of at-risk family pattern (43.4%), (d) lack of social support (36.5%), (e) lack of stable residence (28.9%), and (f) parental illness and/or developmental disability (28.3%). Among the most common Individual Family Service Plan Family Outcomes that Success by Six parents listed on their action plans were: (a) track/assess developmental milestones (69.9%), (b) increase parenting skills/discipline issues (43.1%), (c) lending library or playgroup (41.5%), and (d) increase knowledge about child development (38.2%).

Key Benefits to the OAIM Approach to Community Change include:

1. It promotes a systemic approach to community change that is both outcome based and

asset based — consistent with Foster-Fishman et al.'s (1999) strategies for successful reorganization of human service systems.

2. It is based on community needs, not university needs.
3. It places responsibility for community change on members of the community and therefore builds community capacity towards self-sufficiency.
4. It generates new knowledge and therefore contributes to a scholarly understanding of successful and unsuccessful change processes (Fitzgerald, Abrams, Church, Votruba, & Imig, 1996; Fitzgerald et al., 1999).

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A Jumpstart or False Start? The Effect of the Jumpstart for Young Children Program on the School Readiness of At-Risk Children

Taharee A. Webb

PRESENTER: Taharee A. Webb

Jumpstart for Young Children is a nonprofit AmeriCorps program employing college students as mentors and teachers for disadvantaged children at risk for school failure. The present study investigated whether the free, literacy-intensive program impacted the school readiness of a sample of its participants before and during the 1st year of formal schooling. A group of 46 children were selectively matched from enrollment lists for the 1998–1999 and 1999–2000 academic years at a Head Start in a low-income area. Twenty-three children participated in Jumpstart for times ranging from 1 Jumpstart summer session to 2 academic years and 2 Jumpstart summer sessions. The matched comparison group of 23 children did not participate in the Jumpstart program for any amount of time. Twenty of the 46 children were in their last year of preschool at the Head Start center and the remaining 26 children were in kindergarten during the time of data collection. Using the Parent and Teacher Survey from the Early Childhood Longitudinal Study and the School Success Guide Inventory, parents and teachers of Jumpstart and non-Jumpstart children generated data describing the school readiness of participants and nonparticipants in the spring of their current year of schooling. Primary statistical analyses of these data showed that children who participated in Jumpstart demonstrated higher levels of emergent literacy skills as perceived by parents. Secondary and correlation analyses suggest that higher ratings for involvement in cooperative home activities were significantly correlated with a non-Jumpstart child's perceived literacy ability by both parents and teachers. Children in the Jumpstart program and nonparticipants remained at comparable, insignificant levels across all other areas of perceived school readiness as rated by both parents and teachers, but noticeable differences in mean scores on evaluations for participants and nonparticipants were observed. Implications of this research, plans for the continuation of this project, and suggestions for future investigations of the impact of the Jumpstart program on children are included.

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Characteristics of Low-Income Children From Title 1 Prekindergarten Programs Who Show Greater Academic Competence in First Grade

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PRESENTERS: Dale C. Farran, Carolyn Boyles

It is well documented in the research and policy literatures that children from economically disadvantaged homes are likely to begin school with significantly poorer academic skills than their more affluent peers and are at a much greater risk for school failure (e.g., Alexander & Entwistle, 1988; St. Pierre & Layzer, 1998; Stipek & Ryan, 1997). However, little is known about early-appearing characteristics that predispose economically impoverished young children to become more or less successful in school as the curriculum becomes more rigorous during the early elementary grades. The primary purpose of the present research was to examine connections between children's family characteristics at the time of school entry, observed mastery-related behaviors (strategy use) and social behaviors in their prekindergarten and kindergarten classrooms, and their achievement-test competence in 1st grade.

The participants for the 1st year of data collection were 73 children (CA = 56 mos.) enrolled in Title I prekindergarten classrooms. Sixty-one of these children (64% African American, 16% White, 20% Other) were followed for the 2nd and 3rd years of data collection. Ability/achievement tests were individually administered to children each spring. Measures of academic competence included the Test of Early Reading Ability (TERA; Reid, Hresko, & Hammill, 1989) and the Test of Early Math Ability (TEMA; Ginsburg & Baroody, 1990) for the prekindergarten and kindergarten years, and the Peabody Individual Achievement Test-Revised (PIAT-R; Markwardt, 1989) for reading recognition and math at 1st grade. A set of observational coding categories was designed to record the types of learning-activity contexts and strategy behaviors the children engaged in. Teachers rated selected dimensions of the children's motivation, self-regulatory skills, and social behaviors by completing the short form of the Instrumental Competence Scale for Young Children (COMPSCALE; Adler & Lange, 1997) at the end of each academic year. Multiple regression models were established by including teachers' ratings of motivation, self-regulation, and social assertiveness, observer ratings of overall strategicness in classroom activities, and family size in the home at the time of the child's school entry.

Tests of these models showed that: (a) preexisting levels of math and reading achievement at both the prekindergarten and kindergarten grade levels were reliably associated with respective achievement test scores at 1st grade; (b) children's social-assertiveness ratings from teachers at both the prekindergarten and kindergarten grade levels were associated with reading achievement but not math achievement at 1st grade; (c) the child's family size at the time of school entry was associated with subsequent math achievement but not reading achievement at 1st grade; and (d) by kindergarten age motivation ratings and overall strategicness ratings, in addition to kindergarten math achievement scores, bore reliable connections to subsequent 1st-grade math achievement. It appears from the present findings that levels of math and reading achievement in the 1st grade are consistently influenced by math and reading competencies established earlier in the prekindergarten and kindergarten grades. However, it also appears that 1st grade scholastic achievement levels are sensitive to resource characteristics of the children's family environments at the time of school entry and to differences in the children's social behaviors in prekindergarten and kindergarten classrooms.

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New York State's Universal Prekindergarten Program: Early Childhood Education in a Contextual Setting

Ruth Singer

PRESENTERS: Sheila Evans-Tranumn, Cynthia E. Gallagher

In 1997, the New York State Legislature enacted the Universal Prekindergarten Program (UPK) that will, when fully phased in, allow all school districts in the state the opportunity to implement a state-funded prekindergarten program. The framework for UPK incorporates the fundamentals of a high-quality, developmentally appropriate early childhood program. Meeting the early learning needs of a broad spectrum of young children and supporting collaboration with early childhood programs is axiomatic to the framework established for UPK. The UPK poster presentation will outline the highlights of the development of the program and summarize the most important elements of program implementation, addressing its contextual relevance for children and families.

UPK supports the concept of a child's universal opportunity to access a high-quality, developmentally appropriate prekindergarten program. The program was launched during the 1998–99 school year and was made available to the first group of districts eligible to participate. It is anticipated that the New York State Legislature will allocate additional funds each year, enabling more school districts to offer the program to an increased number of children.

The focus on children, and the involvement of their families in the learning process, is paramount to establishing the contextual setting of a child's educational experience. Over the past several years, New York State has adopted higher learning standards for all students. As these standards are being implemented, it is imperative that students are provided the assistance needed to achieve success. UPK supports and strengthens the standards by bolstering a child's educational foundation. Continuity between the prekindergarten curriculum and the curriculum presented in kindergarten and the lower elementary grades will help to ensure that the essential building blocks needed to master the standards are in place. Further, effective transitions between prekindergarten and the elementary and secondary grades continue to reinforce essential linkages.

Community involvement in UPK is ensured by the role that the diverse Advisory Board plays in the development of the program plan. Membership must include a variety of constituents, including parents. Another central component of the UPK legislation is the mandated collaboration between school districts and community based programs. The statute reinforces the importance of building on an existing service delivery system by requiring school districts to contract a minimum of 10% of their grant with early childhood programs. These include Head Start, day care centers, nursery schools, proprietary schools, and group family day care programs.

Regulatory policies support the quest for high-quality prekindergarten programs through a variety of measures. In addition to the instructional component, required components address support services, the inclusion of children with special needs, qualified staff and staff development, parent involvement, meeting the needs of English language learners, and the issue of continuity and transitions between the prekindergarten program and subsequent grades.

In closing, New York State's Universal Prekindergarten (UPK) provides needed continuity between home, school, and community-based early childhood programs by enabling young children to receive vitally important, high-quality prekindergarten services in the contextual setting of a child's own school district.

Head Start: Collaborative Potential in New York State's Universal Prekindergarten Program

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PRESENTER: Kristi S. Lekies

In 1997, New York became the second state after Georgia to enact universal prekindergarten legislation (UPK), aimed at voluntary educational services for all 4-year-old children. Key requirements include early literacy activities, support services, parent involvement, teacher certification, staff development, and collaboration of at least 10% of funds with community-

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based organizations. As increasing numbers of school districts and children participate in the program, UPK will have impacts on early care and education efforts throughout the state. Of importance is the relationship between state funded UPK and federally funded Head Start. Does Head Start have a role in UPK? What is the potential for Head Start and UPK to complement each other through collaboration?

This study examined Head Start involvement in New York Universal Prekindergarten during the 1st year of implementation (1998–1999). The sample consisted of rural and urban upstate districts with UPK programs (*N* = 65), along with all New York City districts (*N* = 32). Content analysis of the districts' UPK program plans was used to assess Head Start participation in the planning process and the use of Head Start sites, staff, and resources.

New York's experience indicates an important role for Head Start. Overall, Head Start was included to some extent in over 70% of upstate plans and 66% of New York City plans. Head Start directors, teachers, and staff served on UPK advisory boards in 67% of upstate districts and 60% of New York City districts. A substantial number also utilized Head Start sites and staff. For upstate districts, Head Start facilities were selected as UPK sites in over one quarter (26%) of the plans. Additionally, 9% of districts contracted with Head Start personnel to provide services in public school buildings. The percentages of UPK children served by Head Start ranged from 3 to 100%, with an average of 51%. In 5 of the 65 districts, children were served exclusively by Head Start. In New York City, Head Start sites were used in approximately one third (34%) of the districts, serving an average of 15% of the children.

Furthermore, over 40% of upstate plans mentioned the use of Head Start resources in their UPK programs. Resources most frequently discussed included parent education, staff development, transportation, and wrap-around child care. Additional collaboration included comprehensive health, mental health, nutrition, and family services for UPK children; Head Start-public school committees for transitions into kindergarten; Head Start selection committees for recruitment of UPK children; and efforts to reduce Head Start waiting lists.

Both Head Start and UPK aim to provide quality early care and education services. The findings suggest considerable collaborative potential for Head Start. Head Start can gain new resources from UPK, and UPK can benefit from Head Start's expertise and strong programming components already in place. Efforts to facilitate joint discussions among existing programs and support contracting arrangements can help to strengthen the overall early care and education network (Hicks, Lekies, & Cochran, 1999). Further research in the upcoming years will provide additional insight into the nature of Head Start and UPK partnerships.

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Supporting the Development of Informal Mathematical Knowledge in Young Children

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PRESENTER: Linda Charmaraman

The first national education goal, readiness to learn, recognizes the need for young children to be better prepared for school. Readiness includes the need for young children to construct a critical foundation of informal mathematics knowledge upon which formal mathematics knowledge is built in elementary school. Research has revealed the existence of cross-socioeconomic differences in young children's mathematical development prior to school entry (e.g., Jordan, Huttenlocher, & Levine, 1994; Starkey & Klein, 1992). Thus, children from different socioeconomic backgrounds enter school at different levels of readiness for mathematics. Intervention research has shown that low-income children benefit developmentally from mathematical enrichment (Starkey & Klein, in press). This indicates a need for a conceptually broad prekindergarten mathematics curriculum to ensure that all children have the opportunity to develop a solid base of informal math knowledge.

The objectives of our project were: (a) to conduct a more comprehensive study of the cross-socioeconomic gap in prekindergarten children's informal mathematical knowledge, (b) to gather data on how early mathematical development is being supported at home and in classrooms, and (c) to develop and field test a prekindergarten math curriculum in preschool classrooms. The curriculum was tested in programs serving middle-income families and in Head Start and California State Preschool programs serving low-income families. Ten teachers, 163 parents, and 163 children participated. Each field-test classroom served as its own baseline. The effectiveness of the curriculum was evaluated by pretest (fall) and posttest (spring) assessments of children's mathematical knowledge. The baseline group was prekindergarten children who had the same teachers in the same classrooms during the year before the math curriculum was implemented. A Child Math Assessment (CMA) instrument was developed to measure children's mathematical knowledge.

We found that low-income children began the prekindergarten year with significantly less developed informal mathematical knowledge than their middle-income peers ($p < .01$). Children who received the math curriculum experienced significant growth in their mathematical thinking over the year. Furthermore, low-income children made more progress, relative to their starting point, than middle-income children. Both low-and middle-income, field-test children had developed significantly more extensive mathematical knowledge by the end of the prekindergarten year than their corresponding groups of baseline children. The math knowledge of low-income, field-test children and middle-income, baseline children was statistically similar at the end of preschool. Thus, the curriculum reduced or closed the SES-related gap in informal math development.

Findings of a teacher survey and a parent questionnaire are also reported in the poster. Questionnaire data from parents were linked to their children's performance on the CMA. Head Start parents of children with relatively high CMA scores held higher expectations about their children's mathematical development than Head Start parents of children with lower scores. Furthermore, the parents of high-scoring children attributed more importance than parents of low-scoring children to the home-learning environment in preparing children for school mathematics.

In conclusion, young children, and especially those from low-income families, experience significant mathematical growth when their learning environments are enriched mathematically. Such enrichment prepares children for mathematics in standards-based elementary schools.

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School Transitions

Educational Transitions in Early Childhood, Middle Childhood, and Early Adolescence: Head Start Versus Public School Prekindergarten Graduates

Rebecca A. Marcon

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Head Start's effectiveness has been challenged because benefits are not maintained as children progress in school. Lee and Loeb (1995) believed early benefits are undermined if Head Start graduates are subsequently exposed to lower quality schooling. This current study examined longitudinal data from an urban school system that provides both Head Start and prekindergarten programs for young children in our nation's capital. Both programs serve children from predominantly low-income African American families.

Academic performance of Head Start and prekindergarten graduates was compared at four educational transitions. No differences in grade retention or special education placement were found between Head Start and prekindergarten graduates. In preschool, Head Start children's mastery of skills was comparable to that of prekindergarten peers in all areas except lower number and prereading skills. In kindergarten, Head Start graduates were comparable to prekindergarten graduates in all areas except lower physical skills. However, notable differences appeared in 1st grade with Head Start graduates receiving lower grades in all subject areas. In 3rd grade, GPA of Head Start graduates remained lower than prekindergarten peers, and difficulty with language was evident in lower Comprehensive Test of Basic Skills (CTBS) achievement test scores. However, in 4th and 6th grades, Head Start graduates' academic performance was comparable to that of prekindergarten graduates in all areas except handwriting. No significant differences between Head Start and prekindergarten graduates were noted in 6th grade CTBS scores.

Head Start graduates were successful in all major educational transitions except for transition to 1st grade. Although the kindergarten transition found Head Start graduates had made gains in number skills, they began to fall behind peers in1st grade. However, by the end of early childhood, Head Start graduates were more successful than prekindergarten peers in making the difficult transition to 4th grade. They showed notable increases in GPA and mathematics, reading, language, and handwriting. In transition from 4th to 6th grade, Head Start graduates' academic gains were comparable to those of prekindergarten peers in all areas except handwriting. Comparison of 3rd and 6th grade CTBS scores indicated Head Start graduates improved earlier deficiencies. Language scores of Head Start graduates increased 21% while prekindergarten scores declined 20%. Head Start graduates increased 38% in math computation since 3rd grade while prekindergarten decreased 21%.

Does Head Start make a difference in later academic performance? It depends. Head Start does not bring children up to the level of more affluent peers who attended prekindergarten. However, after 1st grade, language was their only notable remaining deficit. Although Head Start graduates had difficulty with the 1st-grade transition to formalized learning, they were successful in all subsequent transitions. Success of this study's Head Start graduates may be explained by their exposure to a more developmentally appropriate educational intervention. Overly academic-directed early experiences negatively affect later achievement (Marcon, 1995). Additionally, parents of these Head Start graduates were more likely than prekindergarten parents to be involved in children's school experiences (Marcon, 1999a, 1999b). When Head Start is done well it can have an extended influence on its graduates' academic achievement.

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Embedding Early Literacy Interventions in Ecologically Sound Transitions From Head Start to Kindergarten: Pueblo Culture, Public School Culture, and Head Start Culture

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PRESENTERS: Laura B. Smolkin, Joseph H. Suina, Rosario Roman

A 3-year research effort examined whether the early literacy preparation of rural, reservation children by Head Start teachers of their own tribe, most holding only Child Development Associate certificates, could be improved through a long-distance, researcher-supplied intervention set within a developing local context of supporting transitions to kindergarten. Year 1 established base levels of the comparison group's ($n = 71$) performance on the rhyme and beginning sound tasks of Phonological Awareness Literacy Screening (PALS; Invernizzi, Meier, Swank, & Juel, 1998); literacy activities and instruction occurring in the 4-year-old Head Start classrooms were also documented. In Year 2, 12 weeks of an intervention designed to enhance phonological awareness, an ability established as highly predictive of early reading achievement (Adams, 1990) through the chanting of nursery rhymes, a culturally congruent act (e.g., Erickson, 1987), were delivered to four targeted teachers whose classes totaled 74 students. In Year 3, following the dismissal of all Head Start staff by the tribal government, 17 weeks of a more comprehensive literacy intervention (weekly book readings accompanied by four types of literacy-related activities added to previous rhyming activities) were delivered to the five targeted teachers whose classes totaled 81 students. Only one Year 2 teacher was rehired in Year 3; all other Year 3 teachers had considerably less teaching experience than those of either Year 1 or 2.

For all cohorts, children's scores on the two measures improved from fall to spring. However, an ANCOVA, using fall test scores as the covariate, revealed significant differences among the cohorts for rhyme ($F1, 191 = 5.896, p < .003$) and for beginning sound awareness ($F1, 185 = 8.256, p < .001$). Post hoc tests using a Neuman-Keuls procedure showed that Year 1 scores on rhyme were significantly less than those of either Year 2 ($p < .01$) or Year 3 ($p < .01$); scores on beginning sound were also significantly less than those of Year 2 ($p < .01$) or Year 3 ($p < .05$). The two treatment years also differed significantly from one another on both measures: Year 3 children scored significantly lower on both rhyme ($p < .01$) and beginning sound ($p < .01$).

Adjusted means for both treatment groups on both measures (rhyme: Year 1 $M = 4.67$, Year 2 $M = 6.09$, Year 3 $M = 5.28$; sound: Year 1 $M = 4.01$, Year 2 $M = 5.79$, Year 3 $M = 5.11$) fell within the benchmark scores set for fall kindergartners (Invernizzi, Robey, & Moon, 2000) while those for the untreated Year 1 comparison cohort did not.

Year 3's more comprehensive literacy program, expected to have been delivered in an additive fashion (rhyme plus book knowledge), appeared to have been delivered by the less experienced teachers in a more piecemeal fashion. Teachers selected from a larger range of options instead of implementing either aspect in its complete form. Despite this, Year 3 children still performed at significantly higher levels than the children of the comparison group on both rhyme and sound. These results indicate that long-distance delivery of early literacy programs to Head Start teachers with minimal experience and training can result in improved early literacy skills for rural 4-year-old children.

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Native American Children in Transition From Reservation Head Start to Public School Kindergarten

Cheryl D. Clay

PRESENTER: Cheryl D. Clay

Children need to be socially competent (effective and appropriate) in order to participate in mainstream education. Native American children are disproportionately referred out of mainstream education in the public school of this study. The purpose of this study was to examine the social competence of Native American children during their transition (last 3 months of reservation Head Start and first 3 months of kindergarten) to kindergarten. The study was conducted in Towaoc, Colorado on the Ute Mountain Ute Reservation and Cortez, Colorado at Beech Street Kindergarten.

This qualitative study was an ethnography of schooling (Spindler, 1982) of at-risk (Sameroff, Seifer, Barocas, Zax, & Greenspan, 1987) Native American children. During the fieldwork, March through November 1992, participant observations, time samplings, documents, and interviews provided the data for analysis of social competence. The Hierarchical Model of Peer-Related Social Competence (Guralnick, 1992) was used to analyze data based on the social interaction patterns of six Native American children with peers in both Head Start and kindergarten. Interactions between children and adults were also recorded. In addition, the Transition Activity Checklist provided: (a) information about the participation of children and parents in activities designed to ease the transition to kindergarten, and (b) a comparison with transition activities recommended by the Administration for Children Youth and Families in1988.

The findings show that:

1. The participants in this study demonstrated less social competence (effectiveness and appropriateness) during their first 3 months of kindergarten compared to their last 3 months of Head Start according to the California Social Competence Scale (Levine, Elzey, Lewis, 1969) and the Hierarchical Model of Peer-Related Social Competence (Guralnick).
2. The Native American boys were referred out of mainstream education while the Native American girls remained in mainstream education.
3. The transition activities, especially the kindergarten visitation, helped to smooth the entry of Native American children into kindergarten.
4. The Hierarchical Model of Peer-Related Social Competence showed a disruption in the reciprocal use of oral language with peers in kindergarten compared with Head Start classrooms. Likewise, patterns of reciprocal oral language with adults were different in kindergarten.

Implications:

1. The social disruptions and academic difficulties of Native American children in mainstream education will be ameliorated with more Native American teachers in kindergarten classrooms. In addition, all kindergarten teachers should be trained in early childhood education and English as a Second Language methods (active, visual learning and the involvement of family members in education).
2. Head Start and kindergarten curricula of this study should include images, books, and literacy activities, as well as art and music of numerous native cultures, especially the local Ute people. Head Start and kindergarten curricula ideally will provide developmental continuity between the two programs and cultural relevance for Native American students in both settings. In particular, children in both settings need ample opportunities to interact with peers within classrooms to support oral language development and social competence (effective and appropriate peer interactions). Particular areas for attention include vocabulary development, directional, and positional concepts.
3. Teaching methods for Native American students should be developmentally appropriate and culturally relevant. Developmentally Appropriate Practices facilitate developmental continuity between preschool and kindergarten. A constructivist approach emphasizes small group, active learning, hands-on methods and the meaningful, functional application of academic concepts (Hankes, 1996). Small cooperative learning groups (Johnson & Johnson, 1983) are especially appropriate for children who participate in a more communal reservation lifestyle.
4. Transition activities should be continued and enhanced to provide familiarity of children and parents for kindergarten. In addition, specific transition activities should be designed to enhance cognitive and language development at home, Head Start, and kindergarten. Training materials should be culturally relevant; they should include ways teachers can teach concepts at school and ways parents can informally reinforce concepts within functional daily routines at home.
5. The Hierarchical Model of Peer-Related Social Competence should be expanded to include the impact of culture (physical and social settings, culturally related customs, and the psychology of significant caregivers) on the development of reciprocal peer social interactions of Native American children.

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Changes in Parent Involvement and Student-Teacher Relationship Quality Following the Transition From Head Start to Kindergarten

Angela R. Taylor, Sandra Machida

PRESENTERS: Angela R. Taylor, Sandra Machida

The drop-off in academic gains following the transition from Head Start to elementary school has now been well documented in the literature. Still, there is a need for longitudinal research documenting short-term outcomes of Head Start (Lopez & Tarullo, 1998), including changes in patterns of parent involvement and other aspects of the child's classroom learning environment. Accordingly, the purpose of this prospective, longitudinal study was twofold: (a) to describe the changes in parent school involvement and teacher-child relationship quality that occur between Head Start and kindergarten, and (b) to examine the effects of these changes on children's social and academic outcomes in kindergarten.

Fifty-seven former Head Start children (54% males, 75% Mexican American, 46% Spanish-speaking, mean age = 6 years), their primary caregivers (93% mothers), and their teachers (Head Start, $N = 11$; kindergarten, $N = 42$) participated in the study. At the end of Head Start, children's cognitive verbal ability was assessed using the Peabody Picture Vocabulary Test-Revised (Dunn & Dunn, 1981), and children's school competencies and problem behaviors were assessed using the Teachable Pupil Survey (Kornblau, 1982) and the Preschool Behavior Questionnaire (Behar & Stringfield, 1974), respectively. At the end of Head Start and again at the end of kindergarten, parents and teachers completed a 6-item questionnaire on the frequency of parent involvement in various school activities (e.g., helping in the classroom, attending parent meetings), and teachers rated the degree of closeness, conflict, and dependency in the teacher-child relationship using the Student-Teacher Relationship Scale (Pianta & Steinberg, 1992). Kindergarten teachers completed the Teacher-Child Rating Scale (Hightower et al., 1986) to assess children's school competencies (frustration tolerance, assertive social skills, task orientation) and problem behaviors (externalizing behavior, internalizing behavior, learning problems) at the end of kindergarten.

Two-way (gender X time) repeated measures ANOVAs and MANOVA were conducted to examine changes in parent school involvement and teacher-child relationship quality from Head Start to kindergarten. Results revealed that both parents and teachers reported significantly lower levels of parent involvement in school activities during kindergarten (parent report, $M = 2.60$; teacher report, $M = 2.42$) as compared to Head Start (parent report, $M = 3.29$; teacher report, $M = 3.17$). In addition, there was a significant decline in teacher-child closeness following the transition to kindergarten (Head Start, $M = 4.23$; kindergarten, $M = 3.97$).

Hierarchical regression analyses were conducted using residualized change scores to predict children's social and academic outcomes in kindergarten. Results showed that, after controlling for child entry characteristics (i.e., gender, cognitive ability, school behavior), decreased parent school involvement predicted more learning problems ($F = 7.49$, $p < .01$) and lower task orientation ($F = 5.58$, $p < .05$); whereas decreased teacher-child closeness predicted more externalizing ($F = 6.37$, $p < .05$) and internalizing ($F = 36.56$, $p < .001$) behavior problems, lower frustration tolerance ($F = 12.69$, $p < .01$), poorer social skills ($F = 32.89$, $p < .001$), and lower task orientation ($F = 10.34$, $p < .01$).

Consistent with prior research, our findings show an attenuation of the family-school relationship following the transition from Head Start to kindergarten. Children in our sample experienced a decrease in both parent school involvement and teacher-child closeness. Furthermore, these declines were associated with less optimum social and academic outcomes in kindergarten. These findings provide further support for programmatic efforts to help low-income families better bridge the gap between Head Start and elementary school.

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Helping Prepare Children to Start Public School: How Communities are Responding to Transition

Joy C. Phillips, Gwen Chance

PRESENTER: Joy C. Phillips

This research study was conducted with three Texas communities engaged in developing newly integrated human service delivery systems. The communities profiled in this paper were chosen because they had agreed to work in collaboration with other programs in their community to improve the "transition" of young children from early care and education programs into public school. Each community received a small grant ($5,000) from the Texas Head Start State Collaboration Office to assist with efforts to plan and implement transition activities. The purpose of the study was to understand how each community had conceptualized the process of transition, how each had organized their efforts, what activities had resulted from the early efforts, and how parents perceived the effect of the transition activities.

Data were collected for this study using the qualitative methods of focus group meetings and interviews with organizational representatives and parents in each community. The data collection process began with a joint focus group meeting of key representatives from the three communities. Using the information provided at this focus group meeting, the researchers scheduled a set of meetings, interviews, and visits in each community. During the site visits the researchers observed early childhood programs (i.e., Head Start, Even Start, kindergarten classes) and talked directly to program staff and parents.

Recent research conducted on a school-community collaboration for family literacy (Phillips, 1999) suggests that effective collaboration initiatives evolve through a set of five developmental stages. Using this developmental framework for analysis of the data collected in this study, a view of the transition efforts emerges that illustrates how each community has responded to the process in an individual manner.

Each of the communities conceptualized the process of transition differently, which led to each identifying a unique set of stakeholders (stage 1). Two of the Transition projects were led by staff from the local school district; the third project was led by staff from the Head Start program. All three communities included stakeholders from the early childhood community, but one included an array of other community human service providers as well.

The national STEPS training model (Byrd & Rous, 1991) was cited by representatives of all three communities as being especially helpful in providing a mechanism for community teams to set goals (stage 2). The scope, organization, and details of each community's goals were, however, based upon perceived local needs and available resources. Nevertheless, all community representatives agreed that the number one goal was "to provide a seamless transition for all children" in the service area.

The three communities in this study are in the very early stages of implementing (stage 3) their Transition plans. The data did suggest, however, a variety of interesting activities and strategies that other communities can consider. Initial data reveal that each community is on the way toward establishing the Transition project as a uniquely positive feature of the community (stage 4). On the other hand, all community representatives agreed that determining measures to assess effectiveness (stage 5) of their efforts might be their greatest challenge yet.

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The Transition to School in African American Families: A Study of Parental Beliefs, Values, and Practices

Fabienne Doucet, Jonathan Tudge

PRESENTER: Fabienne Doucet

The transition to school for young children is among the most important steps in their development (Entwistle & Alexander, 1993; Mangione & Speth, 1998; Ramey & Ramey, 1994). For African American children, this transition is punctuated with complex issues that may not be as salient for children from majority ethnic groups (Swick, Brown, & Boutte, 1994). The purpose of this study was to investigate the beliefs of middle class and working class African American parents (and caregivers) concerning their role in preparing their preschool children for kindergarten or school. The study addressed two questions: (a) In what ways do African American parents of preschool children believe they should be preparing their children for kindergarten and/or school? and (b) How are these parents' beliefs about preparing their children for school related to the activities in which they engage with their children?

Building on observational research during which preschool children were observed for 20 hours over the course of a week in whatever settings they found themselves (Tudge & Putnam, 1997; Doucet, 1998), 13 African American families participated in qualitative interviews, 2-3 years later. Preliminary analyses of the findings show some interesting trends. First, parents and caregivers seem especially concerned that their children have good social skills when they get to school (being nice to others, listening to the teacher, knowing who strangers are). Although they also discuss the importance of reading and counting and so forth, they clearly feel that their child-rearing role is to prepare the child to be a well functioning member of society.

When asked whether they believe African American and White children need to know different things when they go to school, some class differences seem to emerge. Middle class participants were more likely to report that African American children needed to know that they would be expected to work twice as hard to reach the same level as their White counterparts, whereas working class participants were more likely to report that all children are the same. However, working class parents were also more likely to report that they felt White children were being taught at home that they were better than other children, and that this was wrong.

The participants all reported that their child was moving nicely towards being prepared for the transition to school. They noted that their children were enjoying school and were excited about it, and many of them had had conversations about what the following year would bring (moving to a new school, more homework, etc.) In terms of activities, parents and caregivers reported spending time doing educational activities such as reading at home together and going on outings to the library or the Greensboro Children's Museum. Fathers tended to talk more than female caregivers about spending time playing with their children. Most parents reported that compared to the time when the observations were being conducted (2-3 years ago), their children spent more time on school-related activities such as reading and learning about how the world works.

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A Collaborative Intervention to Build Relationships and Smooth the Transition to Kindergarten

Marcia Kraft-Sayre, Sara E. Rimm-Kaufman, Robert C. Pianta

PRESENTERS: Marcia Kraft-Sayre, Sara E. Rimm-Kaufman

This poster describes preliminary findings from the National Center for Early Development and Learning (NCEDL) Kindergarten Transition Project. Research and theory points to the importance of relationships in supporting children during the transition to kindergarten. As academic and social demands intensify, positive social relationships—a familiar peer in a new classroom, a supportive parent at home, a familiar teacher, and/or a strong relationship between a parent and a teacher—ease children's transition experience. These relationships have been shown to relate to children's later academic and social outcomes, and there is evidence that these relationships can be enhanced during the early years of school.

The NCEDL Kindergarten Transition Project established a Collaborative Design Team composed of preschool and kindergarten teachers, family workers, principals, parents, and researchers. Our goal was to develop a socially relevant intervention to ease the transition to school for children and families. Together, our Collaborative Design Team determined community needs, developed transition activities, discussed challenges in enhancing relationships, implemented menu-based, flexible transition practices, promoted continuity between preschool and kindergarten programs, and fostered collaboration among families, schools, and community resources.

Our study asked three questions: (a) What transition practices do teachers choose? (b) How do families and teachers view each other's effectiveness? and (c) How do mothers rate preschool staff versus other sources of support in raising their children? We selected 110 children (70 African American, 31 White, 9 Other) in two preschool programs; 91 of these children were eligible for free or reduced lunch. We enrolled 10 preschool teachers, 37 kindergarten teachers, and 7 family workers. School personnel implemented transition practices designed to ease children and their families' transition to school. Examples of these practices included: a) parents meeting with preschool and kindergarten teachers to discuss expectations for kindergarten and their children's specific needs, b) children visiting their future kindergarten classrooms, and c) preschool and kindergarten personnel discussing classroom practices and specific needs of individual children. Among the data collected, preschool and kindergarten teachers completed a questionnaire about the types of transition practices used. Preschool staff and families rated each other's effectiveness. Parents described the helpfulness of the preschool staff and other sources of support during the fall, winter, and spring of their preschool year.

We present three findings. First, preschool and kindergarten teachers chose a range of transition practices. Frequently used practices included visits to the kindergarten classroom by the preschool teachers and preschool children. Less frequently used practices included preschool and kindergarten teachers' meetings about specific children or about the curriculum. Second, families viewed preschool staff as more effective than preschool staff viewed families. Third, most mothers reported preschool staff as very helpful in raising their children, and support from preschool staff increased from fall to spring.

Our findings showed that: (a) it is possible to form a collaborative relationship among key players in the transition process; (b) transition practices should be tailored to individual needs of children, families, and schools; and (c) interventions can foster relationships that serve as resources for children and their families during transition.

Social/Emotional Development

Narrating Social Conflict: Opportunities for Complex Gender Socialization

Colette Daiute

PRESENTER: Colette Daiute

Research has indicated that boys' social development lags behind girls'. Boys are less likely than girls to express emotion, empathy, and intimacy and more prone to physicality, violence, and autonomy (Blyth & Foster-Clark, 1987; Gilligan, Lyons, & Hanmer, 1989). Recent conceptualizations of psychosocial development suggest the need for methods that move beyond dualistic accounts (Garbarino, 1999; Way, 1997), and large-scale studies that highlight the importance of contextual factors (Weissberg, Caplan, & Harwood, 1991). Expanding theory and method, this poster presents an inquiry into whether and how narrative assessments offer complex profiles of youth social orientation. The context-rich, descriptive nature of narrative lends itself to the examination of complexity and variability of social representations (Miller, 1994).

The study presented in this poster focused on repeated narrative writing by 3rd- through 5th-graders over a school year in the context of a violence prevention program basing conflict resolution on the values of intimacy and autonomy (Sullivan, 1953). Thus, boys were encouraged to expand their psychosocial options to include perspective taking, empathy, and responsible resolution, and girls were encouraged to account for their own needs as well as the needs of others (Walker, 1998).

The overarching questions guiding the research were: (a) What is the nature of psychosocial orientation in conflict narratives written by boys and girls across context, time, and race/ethnicity? and (b) What do resulting patterns suggest about the use of narrative for examining social orientation? Data included 564 narratives written by 141 girls ($N = 71$) and boys ($N = 70$) from diverse racial-ethnic backgrounds. Each child wrote four individual narratives over the course of the year, including two fictional narratives and two narratives about personal conflicts. Data analyses involved applying the Narrative Social Representations (NSR) Coding Scheme (Daiute, Jones, & Rawlins, 1998) to the data set, doing statistical analyses to address the research questions, and interpreting results in relation to previous research. The NSR coding scheme identifies psychosocial relationships among characters and in the author's narrative voice, including psychological states, the nature of conflicting character perspectives, strategies for dealing with conflicts, social orientations to conflicts, and interpersonal consequences of conflicts. After reliability checks, NSR variables were analyzed with ANOVAS to assess differences across gender, race/ethnicity, narrative context, and time.

Results indicate that social relations representations in narratives by boys and girls differed in predictable ways earlier in the year, but not later in the year, when boys' and girls' narratives were similar in representations of psychological states, dialogue actions, conflicts, and conciliatory resolution strategies. Increased expressions of other orientation, empathy, and reflections on the consequences of conflicts were notable across time in narratives by African American boys, especially in the reality context. Based on these results and analyses of relationships between narrative and other measures of social behavior (Hightower, et al., 1986), the poster discusses the promise and problems of narrative discourse for research on social issues. Since recent attempts to predict youth violence treat writing as transparent reflections of personality and intent, research tools that reveal variability and complexity are timely and important to develop further.

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Head Start Teachers' Beliefs and Practices About the Role of Pretend Play in Early Childhood Development and Education

Julie Spielberger

PRESENTER: Julie Spielberger

Research and theory both indicate the significance of play for children's social, emotional, cognitive, language, and physical development (e.g., Eisner, 1990; Pellegrini & Galda, 1991; Garvey, 1990; Levy, Wolfgang, & Koorland, 1992; Piaget, 1962; Smilansky, 1990;Vygotsky, 1978). Much has been written about the importance of pretend play in early childhood education and strategies for promoting and extending play (Bloch & Choi, 1990; Jones & Reynolds, 1992; Reifel & Yeatman, 1993). However, there has been little research on how teachers understand and facilitate play. Differences in adults' goals for children and attitudes about the value of play and other experiences for learning could create variations in the physical and social environments for play and, in turn, the developmental outcomes of play experiences.

Using multiple strategies of data collection, this study explored Head Start teachers' beliefs about the role of play in early childhood and the teacher's role in children's pretend play. A questionnaire was administered to 50 Head Start teachers in Chicago. Based on their responses, six teachers expressing a range of views on the teacher's role in children's play were then selected to participate in an in-depth study involving interviews and classroom observations.

Results from the sample of 50 teachers indicated that teachers valued pretend play highly, particularly for children's social and emotional development and language. They considered pretend play comparatively less important for cognitive and early literacy development. However, they held different positions on the role of the teacher in children's pretend play. Although a majority believed that it is important for teachers to facilitate children's pretend play without interfering, a sizeable number believed that by involving themselves in children's play, they could extend children's learning.

Reflecting these views, the six teachers observed in the in-depth study displayed a range of behaviors in relation to children's pretend play in the classroom. There appeared to be many different influences on their beliefs and practices, including their goals for children's development, their own early play and school experiences, and their professional experiences and training. Factors such as the High/Scope curriculum, agency policies, and the physical environment also governed practices, as did the beliefs and attitudes of parents, administrators, and public school teachers.

The extent to which play benefits children's learning and development may well depend on how it is perceived and supported by adults. Support for and facilitation of learning through play may come from opportunities for children to explore and use play materials in their own way, and from opportunities to have positive and extended interactions with caring adults. Future research should analyze teachers' communication and behaviors in the context of children's play to further examine the relationship between beliefs and practices and the effects of teachers' beliefs and practices on children's development. This study also indicated the value of giving teachers time to think and talk about their ideas and the use of videotapes as a tool for reflection. The fact that Head Start teachers did not readily recognize a link between pretend play and literacy development also suggested that they might benefit from experiences to increase their knowledge of how to incorporate reading and writing in dramatic play activities.

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Preschoolers' Social Skills: Contributions of School, Family, and Child Characteristics

Holly E. Brophy-Herb, Robert E. Lee, Gary Stollak, Alexander Von Eye, Marguerite Barratt

PRESENTER: Holly E. Brophy-Herb

This research explored characteristics of children, families, and classrooms as possible contributors to preschool children's social competence. Specifically, the research measured the following child, family, and classroom characteristics:

- Child characteristics: child temperament (DOTS-R; Windle & Lerner, 1986 and Weschler vocabulary and comprehension subscales; Wechsler, 1989, 1991).
- Family characteristics: (a) family interaction, assessed by direct observation during a series of family tasks (Family Rating Scale, derived from Wampler, Halverson, Moore, & Walters, 1989a; Wampler, Moore, Watson, & Halverson, 1989b and Parent Behavior Toward Child, derived from Baumrind, 1967, 1970, 1977); (b) demographic characteristics; (c) family stress factors; and (d) parents' relationship to and involvement with the school (Family Information Questionnaire and Parent Involvement with School Questionnaire, both developed by the researchers for this study).
- Classroom characteristics: (a) classroom interaction, and ratings of teachers' behaviors toward each assessed by direct observation (Class Rating Scale, derived from Wampler et al., 1989a, 1989b and Teacher Behavior Toward Child, derived from Baumrind, 1967, 1970, 1977).

Social competence was assessed by teachers using the Teacher-Child Rating Scale and by parents using the Parent-Child Rating Scale. Both measures are based on the work of Hightower et al. (1986) and Cowen, Hightower, Pedro-Carroll, Work, and Haffey (1996).

All participating parents and teachers completed ratings of children's social competence. Parents also completed the Family Information Questionnaire, providing information about family demographics and family stress. Researchers observed and rated the preschool classroom environment and teachers' behaviors toward children. Following this initial data collection, families were invited into a laboratory setting to participate in a series of family tasks (a free play task, a family drawing, a construction task, a family problem solving task, and a family planning task). At this time, parents completed the temperament questionnaire and the family involvement with school questionnaire while a researcher administered the Wechsler Preschool and Primary Scale of Intelligence-Revised (WWPSI-R; Wechsler, 1989) to the child.

Initial data on social competence, family information, and classroom environment/teacher behaviors were collected for 145 preschoolers ages 3-6 years (87 boys, 58 girls; $M = 4.2$ years) from seven half-day preschool classrooms, their mothers, and preschool teachers. Preschool classrooms were located in a Head Start program, two local preschool programs, and a university based laboratory preschool program. Sixty-eight percent of mothers reported their ethnicity as White, 6% African American, 3% Latino, 9% Asian, 14% Other. Eighty-four percent of mothers were married. Mean income range was $30,000-$60,000. Thus far, 26 families have participated in the second round of data collection. Data collection and analyses are ongoing.

Teachers' positive ratings of childrens's' social competence were associated with higher family income ($r = .27, p < .05, n = 142$), mothers' age ($r = .23, p < .01, n = 145$), her education ($r = .17, p < .05, n = 145$), her spouses' education ($r = .22, p < .05, n = 128$), and children's WWPSI-R comprehension scores ($r = .42, p < .05, n = 26$). Teachers' negative ratings of children's social competence were related to mothers' relationship status ($r = .35, p < .01, n = 141$). Parents' negative ratings of their children's social skills were related to family stress ($r = .19, p < .05, n = 142$), mothers' relationship status ($r = -.21, p < .05, n = 141$) and to child gender ($r = -.23, p < .01, n = 142$).

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Fussbusters: Using Peers to Mediate Conflict Resolution in a Head Start Classroom

Catherine Wilson Gillespie, Angela Chick

PRESENTERS: Angela Chick, Patricia Smith

Although the federal Head Start program is well known for being a comprehensive initiative that addresses children's education, health, nutrition, and social service needs, its primary purpose and overall goal "is to bring about a greater degree of social competence in children of low-income families" (U.S. Department of Health and Human Services, Administration for Children, Youth, and Families, Head Start Bureau, 1993). Therefore, special attention must be paid to issues of social competence in Head Start classrooms. Because violence is everywhere, attention to issues of social competence should not be limited to Head Start classrooms, but rather included in every early childhood program.

Conflict among preschoolers is a normative, expected part of social development (Killen & Turiel, 1991). Despite numerous articles that outline how teachers can effectively guide preschoolers through peer conflict (e.g., Oken-Wright, 1992; Stanley & Mangin, 1999), teacher intervention is not necessarily the best for children or teachers. At the elementary, middle, and high school level, peer mediation programs have proved enormously successful. However, the process of the mediation must be adapted in order to become developmentally appropriate for preschoolers. It must be more immediate, more informal, and more inclusive.

The challenge in a Head Start or any preschool classroom seems to be creating conflict resolution strategies that children can carry out independently and to the satisfaction of all parties. The conflict resolution strategy suggested in this presentation is a Peace Table that children can utilize whenever they have a conflict that is not resolved to both participants' satisfaction. An integral component of the Peace Table is the Fussbuster, a friend chosen by both

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participants. The Fussbuster mediates the discussion at the Peace Table. Rules and procedures established by teachers and children (in the children's own language) were:

- No hitting; keep hands and feet to self.
- Talk things over.
- One person (talking) at a time.
- Take a helper—a Fussbuster.
- Stay until the problem is solved.
- Shake hands at the end.
- You get your spot back (where you were playing).

Before, during, and after the introduction of the Fussbuster program, one target child with very high levels of conflict was observed for 1 hour each week. Four weeks prior to introducing the program, he had three to five conflicts per observation hour. Over the 7 weeks of observation following the introduction of the Fussbuster program, he had only four total observed conflicts, one conflict each day during the 3rd and 7th week of observations and two conflicts during the 4th week. All four of the observed conflicts after the introduction of Fussbusters were negotiated at the Peace Table and participants reached mutually agreeable solutions.

One of the most encouraging effects of the Fussbuster program was increased self-esteem of children in the classroom who were chosen by their friends to be Fussbusters. In interviews at the end of the school year regarding the program, children volunteered unsolicited comments about their contributions as Fussbusters. They reported being proud to be chosen and feeling helpful and competent as Fussbusters.

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The Relationship Between Fathers' and Children's Communication Skills and Children's Behavior Problems: A Study of Head Start Children

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This study focused on the communicative interaction of fathers with their Head Start children and the relationship of fathers' and children's communicative skills and child behavior problems early and late in the school year. Spontaneous language samples were collected during father-child dyadic interactions shortly after the beginning of the Head Start year from 65 fathers or father figures and their Head Start children. Three measures of communicative competence were selected: (a) Mean Length of Turn (MLT) to measure pragmatic or conversational aspects of communication, (b) Mean Length of Utterance (MLU) for structural-linguistic characteristics of communication, and (c) Type-Token Ratio for lexical diversity (Retherford, 1993) using SALT (Miller & Chapman, 1999). The preschool version of the Social Skills Rating System (SSRS; Gresham & Elliott, 1990) was used to assess teachers' perceptions of the child's social problem behaviors. The SSRS was administered 10 weeks after the beginning of the Head Start school year and again at the end of the school year.

The structural models for externalizing and internalizing behavior confirm the hypothesis that father communication is linked to child communication skills and child communication is linked to behavior problems. The causal linkages in the model for externalizing behavior are from father MLTs to child MLTs and MLUs, and then from child MLUs to Time 1 externalizing behavior. Child MLTs and Time 1 externalizing behavior are linked to Time 2 externalizing behavior. All paths were significant in this model, with the exception of one path: child gender to Time 2 externalizing behavior. Higher father MLTs were associated with lower child MLUs and MLTs. Children with higher MLUs were perceived to have fewer externalizing behaviors at Time 1. Children with higher MLTs at Time 1 were perceived to have fewer externalizing problems at Time 2. The model predicted 40% of the total variance in Time 2 externalizing behavior. After controlling for all other variables in the model, child MLTs predicted 4.7% ($p = .035$) of the variance in Time 2 externalizing behavior. The causal linkages in the model for internalizing behavior are from father MLTs to child MLUs and MLTs. Child MLUs and MLTs are linked to Time 2 internalizing behavior. Child gender is causally linked to Time 2 internalizing behavior, and Time 1 internalizing behavior is causally linked to Time 2 behavior. All paths were significant in this model, with the exception of two paths: child gender to Time 2 internalizing behavior and Time 1 internalizing behavior to Time 2 internalizing behavior. All variables in the model predicted 22% of the variance in Time 2 internalizing behavior. After controlling for all other variables in the model, child MLUs and MLTs explained 16.7% ($p = .003$) of the variance in Time 2 internalizing behavior.

The data suggest that children would benefit from having interactions with adult males who function as equal conversational partners and use linguistically complex utterances. Based on the findings suggesting significant paths between father communication and child communication, and between child communication and behavior problems, interventions with fathers may contribute to having an indirect, but positive, influence on child social behavior.

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Staff Development

The 1999 National Survey of Child Development Associates: A Research Report

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To evaluate the impact of obtaining a Child Development Associate (CDA) Credential, the Council for Professional Recognition, which administers the credentialing system, conducts periodic surveys of CDAs. Results are now available from the1999 Survey of CDAs that builds on previous surveys conducted in 1983, 1988, and 1994. For the first time, the 1999 survey looked at three types of CDAs: (a) recent (those who earned credentials within the previous 3 years), (b) midlevel (credentials earned in 1993), and (c) veteran (those who earned a credential 10 years ago).

A random sample of CDAs granted during those years was identified. Approximately 1,000 surveys were returned, including 142 veteran CDAs and 134 midlevel. The individuals returning surveys matched the demographic profile of CDAs in general. Conclusions that can be drawn are limited by the small sample size and by the self-report nature of the data.

In summary, the survey found a high retention rate among respondents, a positive relationship between CDA credentialing and salary increases, increasing ability of individuals to receive credit for the credential toward postsecondary degrees, and a pattern of continued professional development after credentialing.

One of the most encouraging findings is the extent to which CDAs obtain 2- or 4-year degrees after credentialing, with this trend strongest among those who had been CDAs for 6 years. In this group, 22% held degrees when they became CDAs, while 33% had obtained a degree by the time of the survey. Moreover, the percentage of CDAs completing advanced graduate degrees more than doubled for veteran CDAs and increased slightly for new CDAs. About 42% of respondents received college credit for some, or all of the 120 clock-hour training requirement to obtain a credential, while 22% said they were awarded credit toward a degree for having a CDA.

Another important finding is about the settings where CDAs work. Traditionally a large majority of CDAs have been affiliated with Head Start (80% in the 1983 and 1988 surveys, and 65% in the 1994 surveys). However, in the 1999 survey, the majority of new CDAs (54%) are employed in non-Head Start institutions such as child care centers, preschools, and family child care homes, demonstrating that CDA is fulfilling its original purpose to serve as a general entry-level credential for the profession.

CDAs' professional positions also change over time with 36% assistants or aides at time of credentialing and only 21% remaining in these jobs after. The percentage of teachers (37% to 45%) and supervisors (9% to 14%) also grew. Perhaps most encouraging, significant increases in salary over time were revealed within all groups. The majority of CDAs received a salary increase after earning their credential. The percentage of CDAs earning $30,000 or more annually more than doubled for veteran and midlevel CDAs and nearly doubled for new CDAs from credentialing to survey.

With turnover in child care a major problem, it was heartening to learn that 87% of all respondents are still working in early childhood education. Even among the veterans who are 10 years away from earning their credential, 78% are still in the profession. In addition, they continue to grow, with 60% members of early childhood professional organizations.

The promotions and improved salaries reported by many in the 1999 CDA Survey cannot be attributed to achieving the Credential alone. Certainly, these career achievements are primarily the result of additional years of experience and education, especially for the midlevel and veteran CDAs. Nevertheless, survey results indicate that CDA did provide the entry point to a career in early childhood education and for many, fostered the motivation and commitment necessary to continue their professional development.

The Council conducted the study in collaboration with Howard University's Center for Research on the Education of Students Placed at Risk (CRESPAR).

Staff Development Models in Conflict Resolution, Violence Prevention, and Peace Education: Are Head Start Classrooms Transformed After Teacher Training?

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The PEACE Project study asks whether conflict resolution skills can be effectively introduced to preschool children through a teacher-training model that demonstrates to teachers how to resolve conflict and promote problem solving in young children. The three questions that focus the study are: (a) How do Head Start teachers' conflict-related attitudes and knowledge change after a 40-hour training course on theory and practice to recognize and resolve personal conflict?, (b) How do Head Start teachers' perceptions of their conflict resolution interventions with children change after a 40-hour training course on theory and practice to recognize and resolve personal conflict?, and (c) Do 4-year-old Head Start children in classrooms with teachers who have been trained in conflict resolution show a greater reliance on prosocial methods to resolve conflicts compared to peers in classrooms where the teachers have not been trained in conflict resolution?

The PEACE project offers a model that may enhance social and emotional literacy in Head Start classrooms by training teachers in conflict resolution practices appropriate for 4-year-old children. Research studies targeting preschool children and/or teachers in measures of social and emotional skill development indicate that children benefit from training to promote interpersonal and problem solving skills (Quay & Jarrett, 1984; Saloner, 1988; Shure, 1990). Recent research on social emotional literacy that focuses on school-age children needs to be further tested on the preschool population.

The study, which is in process with Palm Beach County Head Start in Florida, is rooted in various theories of development and learning: sociocultural theory (Vygotsky, 1934/1978), social learning theory (Bandura, 1977), ecological theories of development (Brofenbrenner, 1979), and empowerment theory (Freire 1970/1997; Lederach 1997; Woolpert, Slayton, & Schwerin, 1998).

Six Head Start teachers are enrolled in a 13-week undergraduate level course in conflict resolution and peace education. There are pre and post interviews designed to measure teacher knowledge, attitudes, and behaviors related to the types of conflicts that commonly occur at Head Start settings. In addition to the in-depth interviews, teachers complete a self-assessment of their conflict styles (Thomas & Kilmann, 1974) before the course. After teachers complete the course, children in classrooms of trained teachers (experimental group of 30 children) are tested for interpersonal problem solving ability using the Preschool Interpersonal Problem Solving (PIPS) test developed by Shure (1990). A control group of 30 children in classrooms of teachers who have not received training in conflict resolution will also receive the PIPS test. Qualitative analysis of content from teacher interviews will be done using NUDIST, and statistical analysis using SPSS will compare scores of experimental and control group children's problem solving ability.

Results are expected to be available by the end of 2000. In a 1999 pilot study with 14 teachers from Palm Beach County, posttests indicate that teachers show increased awareness of their own interpersonal approach to resolving conflict. While there were no child assessments done in the pilot study, teachers were observed after course completion and found to have introduced successful methods to promote problem solving and emotional development with children in their classrooms as a result of participation in the course.

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Factors That Influence Job Satisfaction and Job Turnover Among Head Start Staff

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Questionnaire data from 147 Head Start employees are analyzed to examine the relationship between work attitudes and staff perceptions of program collegiality, communication, supervisor support, and innovation. Findings indicate that, in general, employees who view their supervisors as more supportive and perceive their Head Start programs to be collegial and innovative are more likely to have positive work attitudes. A second analysis indicates that—while controlling for salary, experience, and position—as job satisfaction increases, the probability of resigning decreases.

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Predicting Childhood Program Teachers' and Directors' Perceived In-Service Training Needs

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Recently, Epstein (1999) found program quality of Head Start programs to be related to in-service training. In-service training opportunities, though required by most early childhood programs, vary considerably in content and guidelines, depending upon the licensing requirements and/or the contextual program requirements (Sheerer & Bauer, 1996).

The purpose of this study was to investigate how perceived in-service training needs for special topics, of administrative and teaching staff in early childhood programs, are predicted by: (a) developmental issues of age and career stage (Katz, 1972), (b) appropriateness of educational training and prior educational and in-service training (Rodd, 1997; Saracho & Spodek, 1993; Snider & Fu, 1990), and (c) contextual issues of type and quality of program, including quality of environment for staff (Cost, Quality, & Child Outcomes Study Team, 1995). In addition, this study also investigated differences in staff's preference for type of in-service training: on-site training via staff meetings, peer or consultant mentoring, or at local, regional, or national conferences.

Three hundred forty-seven teachers and 55 directors from 47 centers—majority for-profit day care centers (39%) and nonprofit day care centers (37%)—completed surveys based on Abbott-Shim's (1990) in-service needs assessment. The participating staff were predominantly White (88%) with 2% Asian, 4% African American, and 3% Latino; 98% of the participants were female, 44% were over 35 years of age, 29% had more than 10 years in the early childhood field, and 31% had 6-12 credit hours of coursework related to child development. Using a multiple logistic regression, only the appropriateness of their educational training (p = .043) significantly predicted whether both teachers and directors chose child-oriented (i.e., child development, curriculum, and exceptional children) or program-oriented (i.e., child care, families, and staff needs) in-service topic areas for their first topic choice. When their position (teacher or director) was included in the logistic regression, both their position and the appropriateness of their educational training were significant (p = .017, p = 0.37 respectively). Using Chi-square analyses, more teachers than directors preferred their first topic choice to be focused on working directly with children, and more directors than teachers preferred program topic areas for their first choice ($n = 402$, $\chi^2[1] = 11.9$, $p = .001$). The appropriateness of educational training was only significant for teachers ($p = .023$); career stage and environmental quality did not seem to be related to their first topic preference. However, using logistic regression, findings for the preferences of the majority of teachers' and directors' eight choices for in-service training topics support prior research findings that context of the program (type of program; $\chi^2[8] = 33.54$, $p = .000$) and environmental quality ($\chi^2[12] = 21.47$, $p = .04$) plays a role in assessing in-service training preferences (Sheerer & Bauer, 1996).

Therefore, in-service training programs may need to consider the participant's, especially teachers', prior appropriate training and the type and quality of the participant's program. This study found also that the majority of teachers and directors (56%) preferred on-site, in-service training compared to any other type. Although not assessed, perhaps convenience and low expense were factors influencing the preference for on-site training.

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The Study of Benefits for Head Start Employees: How Are We Compensating Head Start Staff?

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The Study of Benefits for Head Start Employees was conducted by Ellsworth Associates in 1997 for the Administration for Children, Youth, and Families (ACYF)/Head Start Bureau. Like salary, fringe benefits affect employee satisfaction, recruitment, retention, and turnover. Early childhood education research indicates that teacher satisfaction and the continuity of staff/child relationships impact program quality and the outcomes of the children they serve. In keeping with Head Start's focus on program quality and improvement (USDHHS, 1993), the objectives of the Study of Benefits were: (a) to assess the benefits available to individuals employed by Head Start agencies under the Head Start Act; (b) to make recommendations for increasing staff access to benefits, including a retirement pension program; and (c) to evaluate the feasibility of Head Start staff participation in the Federal Employees' Retirement System. The study also

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included assessment of benefits satisfaction (at both staff and program levels) and investigated the extent to which fringe benefits impact recruitment, turnover, and retention of qualified Head Start staff.

To date, Head Start programs are not mandated to offer fringe benefits of any type, with the exception of those required by law (e.g., Social Security). Plans offered vary in terms of the type of benefits offered, cost to employees and programs, and eligibility requirements for employee participation.

The impact of benefits on program quality is documented in the reports of the Carnegie Corporation (1994), the National Association for the Education of Young Children (NAEYC; 1996), and the National Center for the Early Childhood Workforce (1996). The relationship between staff benefits and early childhood teacher turnover is also reported in the findings of the National Child Care Staffing Study (Whitebook, Phillips, & Howes, 1993), A Profile of Child Care Settings (Kisker, Hofferth, Phillips, & Farquhar, 1991), and the Cost, Quality, and Child Outcomes in Child Care Centers Study (1995). Similarly, compensation in the form of wages and benefits contributes to the "organizational climate" of an early childhood program (Jorde-Bloom, 1996). Retirement benefits are particularly important for Head Start, as the majority of employees are women. The Department of Labor (1995) reports, "Women are particularly at risk of finding themselves financially unprepared for retirement."

The study was conducted among a stratified, random sample of 360 Head Start programs and 360 employees. Onsite and telephone interviews were held with program directors and employees. Response rate was 87%, yielding a confidence level of ± .05. The majority of Head Start programs have implemented comprehensive fringe benefits programs on behalf of their employees and programs offer a range of benefit options. Virtually all programs (99%) offer health benefits, 82% offer retirement benefits, and 89% provide family and medical leave. Sixty-eight percent offer long-term disability benefits; 41% offer short-term disability. Benefits satisfaction is reported by 63% of employees, but they report the plans are too expensive. As a result, dependents and part-time staff are typically not covered. Participation in retirement plans is limited.

Recommendations to ACYF were to: (a) expand the benefit options, (b) reduce benefit costs, and (c) increase program awareness of benefit impacts.

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A Pre-Student Teaching Field-Based Semester: A Collaboration Between An Early Childhood Program and Head Start

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The impetus for school and university collaboration report (Burstein, Kretschmer, Smith, & Gudoski, 1999) began in the mid 1990s. Findings from the Carnegie Forum's, *A Nation Prepared: Teachers for the 21st Century* (1986) and the Holmes Group's *Tomorrow's Schools: Principles for the Design of Professional Development Schools* (1986) studies recommended the establishment of school-university partnerships to improve teaching and learning. In its findings, the Carnegie Forum proposed that the best learning environment for teacher preparation was a clinical school linking school and university faculty. In its own study the Holmes Group recommended the establishment of professional development schools in which practicing teachers and administrators would work in partnership with university faculty to improve both schools and the preparation of teachers. With these findings and recommendations in mind, the Coordinator of Early Childhood Education at Duquesne University in Pittsburgh, Pennsylvania, selected as partners, Head Start sites under the aegis of the Pittsburgh Public Schools. A Higher Education Initiative grant cemented the partnership. As students observed and participated, they were required to record their experiences in journals and to record behaviors on checklists. Two documents that guided their journaling and other assignments were NAEYC's *Developmentally Appropriate Practice in Early Childhood Programs* (Bredekamp & Copple, 1997) and the *Head Start Program Performance Standards* (U.S. Department of Health and Human Services, Administration for Children and Families, 1996). The former promoted high quality, developmentally appropriate programs for all children and their families; the latter defined the services that Head Start programs were to provide to the children and the families they served. These two sources constitute the most comprehensive statements of expectations and requirements for delivering state-of-the-art early education and care programs.

In addition, the students were required to record children's behaviors on *The Child Skills Checklist* (Beatty, 1994, p. 45-52). The use of this tool enabled students to determine whether the program met the standards for the whole child. The students' written assignments required both an analysis and an evaluation of the programs. Using Section 1304.21, the students compared and contrasted what the standards required as to what they observed. Their lesson plans were also guided by Head Start Program Performance standards' references (1)-iii and (4)-iv (U.S. Department of Health and Human Services, Administration for Children and Families, 1996, p. 57213). In their analysis of the program through journals, case studies, and final projects, the students were able to articulate their understanding of developmentally appropriate practices or lack of them in each of the sites. Course assignments led them to explore program delivery in the following areas: multicultural education, literacy activities, inclusion of special needs children, child-initiated versus teacher-directed activities, daily classroom routines, parent involvement, parent education, and child-child, child-teacher, parent-child-teacher, and parent-teacher interactions. In their final evaluations, the students documented many compliance areas, but many shortcomings.

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Understanding Neighborhood and Community Influences

Promoting Positive Outcomes for Los Angeles Inner-City Preschoolers

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Current research has shown that young children who are exposed to violence in their communities are at risk for psychological difficulties, such as anxiety and depression, peer-related aggression, and impaired socioemotional and cognitive functioning. While it is impossible, in effect, to remove violence from inner-city neighborhoods, we can, however, help to change the maladaptive behavior patterns associated with children's violence exposure by enhancing their interpersonal cognitive problem-solving skills (ICPS).

The most clearly identified risk factors for psychological problems are: (a) antisocial, rebellious, and defiant behaviors; (b) poor peer relations; (c) poor academic skills; and (e) low self-esteem. Previous research with preschoolers has demonstrated that intervention in interpersonal cognitive competence may improve interpersonal behavioral competence, and ultimately promote positive mental health and prevent later psychopathology (e.g., Shure, 1989; 1992). ICPS training can reduce and prevent impatience and impulsivity, over emotionality, aggressive as well as withdrawn and inhibited behavior, and some forms of psychopathology across age groups, social classes, and ethnicities.

The current study presents preliminary findings from the first of a 3-year research project. The goals were to: (a) determine the extent to which young children and their families are exposed to, and distressed by community violence, (b) pilot an intervention designed by Shure to teach 4-year-olds ICPS, and (c) test ICPS as a behavioral mediator for children who are at risk for psychological problems associated with their violence exposure.

Participants were 138 4-year-olds and their families who attended an inner-city Head Start preschool program, and 12 Head Start classroom teachers. Preschoolers and teachers were trained in ICPS. Parents completed the Exposure to Violence Questionnaire to assess the nature and frequency of their children's and other family members' direct and indirect exposure to violence as victims or witnesses. Parents rated their children's distress symptoms and completed the Conflict Tactics Scales (Straus, Hamby, Boney-McCoy, & Sugarman, 1996). Graduate students observed children's social behavior during free play with peers using a checklist adopted from Howes (1987). Children's baseline cognitive functioning was assessed using the Bracken Scales (Bracken, 1984). Children's pre and posttraining problem-solving skills were examined using short vignettes adopted from Shure. Teachers rated children's behavior using the Behavior Assessment System for Children (BASC; Reynolds & Kamphaus, 1992).

Our preliminary data analyses suggest a high proportion of children and their families were exposed to and distressed by violence in their neighborhoods. As might be expected, children who experienced the highest violence exposure also manifested the most distress symptoms.

Second, most children, and all of their teachers were able to learn and use ICPS in their classrooms. Third, the results suggest children who were able to grasp and use the ICPS concepts manifested fewer behavior problems over the school year. Work in progress will test the hypothesis that training in interpersonal problem-solving techniques will help to mediate the effects of community violence.

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Fathering Young Children in Violent Neighborhoods: How African American Head Start Fathers Keep Their Children Safe

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The purpose of this study was twofold: (a) to identify the strategies used by African American fathers to protect their Head Start children from community violence, and (b) to examine individual, familial, and community-level predictors of those strategies. There were two phases to the study. In Phase I, three focus groups were conducted with a total of 18 fathers and father figures residing in targeted high violence neighborhoods to qualitatively identify the protective strategies used by fathers. Content analysis of focus group data revealed 12 general strategies: (a) supervising children, (b) teaching neighborhood-household safety skills, (c) teaching about real-life violence and its consequences, (d) teaching how to fight back, (e) teaching alternatives to violence, (f) reducing exposure to media violence, (g) confronting troublemakers, (h) keeping to oneself, (i) using prayer and positive thinking, (j) arming family for protection, (k) moving away from bad residential areas, and (l) engaging in community activism. During Phase I, this study also collaborated with a United States Department of Education study (Randolph & Koblinsky, 1996) to develop a new measure, the Parenting in Violent Neighborhoods Scale.

During Phase II, 61 biological and social African American fathers of Head Start children were interviewed by trained African American male interviewers. Using the new quantitative measure developed in Phase I, fathers reported on their frequency of using various strategies to protect children from neighborhood dangers. Correlation matrices and confirmatory factor analysis were used to refine the measure, producing five subscales of protective strategies. Regression analyses were conducted to examine the best predictors (e.g., psychological well-being, history of violence exposure, parenting practices, social support, and child's sex) of paternal strategies.

Fathers were found to employ five major protective strategies: (a) supervise children and teach personal safety, (b) teach home and neighborhood safety, (c) reduce exposure to violent media, (d) arm and protect family, and (e) engage in community activism. Authoritative and permissive parenting practices, depression, and social support predicted use of supervision and teaching personal safety. Authoritative parenting, permissiveness, and depression also predicted father's likelihood of teaching children home and neighborhood safety. Child's sex was the only predictor of "reduce exposure to violent media," with fathers of sons more likely to reduce exposure. Depression and social support were the best predictors of father's likelihood of arming and protecting his family. Lastly, authoritative parenting practices and social support predicted father's engagement in community activism.

Using a cultural ecological framework (Bronfenbrenner, 1986; Ogbu, 1981), this study sheds light on the complexities of parenting in violent contexts and provides information that Head Start and other early childhood educators can use to develop violence prevention and intervention programs. Specifically, Head Start should make efforts to engage fathers in a dialogue about community violence and work to unite fathers in launching violence prevention-intervention initiatives, as fathers have a clear interest in increasing their children's safety. Violence initiatives involving African American fathers may draw on Afrocentric principles (e.g., communalism, spirituality, harmony, positivity) that have long sustained communities despite economic hardship (e.g., Nobles & Goddard, 1993). Fathers may benefit from opportunities to discuss parenting in violent communities with other fathers and parent educators.

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Exposure to Violence Among Inner-City Children of Substance Abusing Women and Nonsubstance Abusing Women

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Inner-city children are exposed to violence at high rates (Taylor, Zuckerman, Harik, & Groves, 1994) and exposure to violence has a negative effect on the behavior of young children (Eth & Pynoos, 1994; Olds, 1995; Zuckerman, Augustyn, Groves, & Parker, 1995). Substance abuse in women is frequently associated with violence against the women, including physical abuse and rape (Amaro, Fried, Cabral, & Zuckerman, 1990; Wasserman & Leventhal, 1993). However, it is not clear if inner-city children of substance abusing women are exposed to more violence than inner-city children of nonsubstance abusing women. The purpose of this study was: (a) to determine if children of substance abusing mothers are more likely to be victims of violence, or exposed to violence more often than children of nonsubstance abusing mothers, and (b) to determine if children who are exposed to violence have more behavioral problems than children not exposed to violence.

Participants are part of a longitudinal cohort study of children exposed to drugs prenatally and a matched group of children who were not exposed to drugs prenatally. The present study included 80 mother-child dyads (40 substance abusing mothers, 40 nonsubstance abusing mothers) that were seen for a research visit when the children were 6 years old. To assess the child's exposure to violence both inside and outside the home the following questionnaires were administered to the mothers: The Conflict Tactics Scales-Partner (Strauss, 1979), The Conflict Tactics Scales-Child (Strauss, 1990), and the Exposure to Violence Interview (Taylor et al., 1994). The Child Behavior Checklist (Achenbach, 1991) was administered to assess the child's behavioral problems.

The majority of the mothers in both groups were single (91%), unemployed (71%), and African American (93%). However, substance abusing mothers were significantly older than control mothers ($p < .01$). Since maternal age was significantly different, it was used as a covariate in the group analyses. There were no significant differences in the amount of exposure to violence between children of substance abusing women and children of nonsubstance abusing women either inside or outside the homes ($ps > .05$). Regardless of maternal drug use, children in both groups were exposed to high rates of violence. Children exposed to violence had significantly higher aggressive scores, anxious-depressed scores, defiant scores, withdrawn scores, and social problem scores ($p < .01$) on the Child Behavior Checklist than children who had not been exposed to violence.

Regardless of maternal drug use, inner-city children in the present study were exposed to violence at a high rate, both inside and outside the home. Children exposed to violence exhibited more behavioral problems than children not exposed to violence. More research is needed to determine which factors may moderate the effects of this exposure to violence on child behavior and development.

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Communities, Culture, and Connection: Case Studies in Collaboration in West Virginia

Gretchen Butera

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The efficacy of initiatives that aim to address fragmented social and educational services can best be understood within the context of community and culture. Ethnographic research conducted in West Virginia Head Start programs provides detail about the relationships between community and cultural characteristics and outcomes of collaboration.

The data presented here were excerpted from interviews conducted with key stakeholders (directors, parents, and teachers) in three case study sites. Interviewees were asked about how state and local partnerships were employed in their communities to address child and family need. Data reduction procedures sought to identify themes across interviews that related to community and cultural characteristics. These themes are summarized as follows:

1. I Was Here From the First.
   Interviewees were born and raised in their community and expressed a personal commitment to providing for its well-being. They also had personal experience with Head Start or other forms of early intervention early in their life. As an example, one director explained that she was "radicalized in the sixties" and her work in Head Start "raised her consciousness about the importance of child advocacy." Another director explained with a laugh that "I was in Head Start myself in the sixties and I'm sure all of my success today is due to that summer program."
2. Someone's Always Ripping on Poor People
   Interviewees cited a number of challenges to successful collaboration. Some of challenges were viewed as systemic issues problematic for most educational and social service agencies. However, class issues were also often cited. As one director put it: " It's related to people's attitude about poor people. I'd guarantee the majority of people in my community don't know about Head Start because they just don't want to know. There's a terrible stereotype about poor people. Someone is always ripping on poor people. Head Start is for poor people. That's why the program doesn't get any respect either."
3. Head Start Can Be Closed Shop
   Several interviewees mentioned the need to "listen to the other side" and "resolve philosophical issues." As one interviewee put it "Head Start is a good model for intervention. There's no doubt about that. But it's been a closed shop. But there will be new programs and you have to listen to the other side. We need to pull out what is the essence of Head Start. What is it that makes it work? We need to think outside of the lines that have divided us in the past."
4. Bring It Home
   Interviewees felt that collaborative effort threatened local resources when individuals had to spend too much time traveling to state-level meetings. They also felt that local issues should take precedence over efforts to coordinate programs on a state level. Usually these opinions were explained in part as the interviewee described their community as very resource poor, rural, and geographically isolated. Supplying technical assistance or monitoring programs at a local level was considered important. This was especially the case for interviewed Head Start parents and for those who viewed parent involvement as a critical component to successful collaboration.

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Using Community Needs Assessment to Improve Programs and Policy: Early Childhood Care and Education in Low-Income Communities

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PRESENTERS: W. Steven Barnett, Ellen C. Frede

A recent state Supreme Court ruling in New Jersey entitled all children in 30 of the state's poorest school districts to high quality, free preschool education beginning at age 3. School districts can provide these services directly, but are encouraged to contract with community child care centers and Head Start. All programs must meet a single set of quality standards. The court did not mandate a specific funding level, but ordered the state to provide whatever was required for comprehensive services including transportation. School districts were assigned responsibility for assessing needs and developing programs to meet children's needs.

Most of the Abbott districts joined a Consortium to conduct comprehensive needs assessments with the Center for Early Education Research at Rutgers (CEER) over 2 years. The goal was to obtain information on children's needs and the resources needed for preschool providers to meet them. We assessed abilities at kindergarten entry through teacher ratings and direct assessments. The academic abilities (especially communication skills) of children in these districts lagged behind the national average and far behind those of their wealthier peers.

Compared to national averages, children in the Abbott districts are much more likely to live in families where the parents did not complete high school and the primary language is not English. Over 60% of their mothers work, many full-time. At ages 3 and 4 children lagged behind their peers on indicators of academic ability from the National Household Education Survey (NHES; National Center for Education Statistics, 1993; Zill, Collins, West, & Hausken, 1995). One third had fewer than 10 books in their homes compared to 15% nationally, and more than 10% were not read to even once a week at home (only 5% nationally). Children in the Abbott districts were less likely to be in good health, more likely to have missed a meal, and less likely to have seen a dentist. Finally, 44% had no safe place to play outdoors.

Key issues for districts are whether to provide a half-day or full-day program, double sessions (both morning and afternoon), services during the summer, and transportation. The vast majority (80%) of parents responded that a full-day program would be better educationally for their child than a half-day program, and 74% indicated that a summer program would help their child learn and prepare for kindergarten "a great deal." Even parents not currently sending their child to a center-based program overwhelmingly supported full-day and summer programs for educational reasons. Transportation needs were especially high if only half-day programs were offered.

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Program quality was assessed through Director reports and observation using the Classroom Practices Inventory (CPI; Hyson, Hirsh-Pasek, & Rescorla, 1990) and Early Childhood Environment Rating Scale (ECERS-R; Harms, Clifford & Cryer, 1998). Few programs met court guidelines for quality. Directors reported that appropriate practices were used regularly, but not most of the time. CPI observations indicated that the classrooms used appropriate practices less often than required for an effective program and found a moderately high level of inappropriate practice. The average ECERS-R score was 3.9. Head Start programs scored higher than other community programs. They used more appropriate practice and less inappropriate practice. Head Start classrooms had more highly qualified teachers and smaller class sizes.

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How Head Start Is Perceived by Community Service Providers: Lessons to Be Learned

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PRESENTERS: Mary Ann D'Elio, Michael Vaden-Kiernan

Meaningful community partnerships are critical for the successful delivery of services for Head Start families. A better understanding of these partnerships is needed, particularly from the community service provider's perspective. Findings from a survey of 200 community service providers on the nature of the linkages as well as the quality of the relationship between Head Start and community providers was reported.

(Abstract from program; poster summary not available for publication)

Welfare Reform and Impact on Children and Families

A Descriptive Profile of Child Care Arrangements for the Young Children of Current and Former Welfare Recipients

Kathryn Tout, Martha Zaslow, Stefanie Schmidt, Sharon Vandivere

PRESENTERS: Kathryn Tout, Martha Zaslow, Stefanie Schmidt

Federal welfare reform legislation passed in 1996 strengthens work requirements for all welfare recipients, but allows states to exempt single parents with infants from work requirements. Close to half of the states, however, do not allow this exemption for children under the age of 1, and welfare recipients in another quarter of the states are required to work when their child turns 1. As a result, increasing numbers of welfare recipients need to secure child care as they make the transition to employment, school, or training programs. Because infant and toddler care is more expensive and in shorter supply than other types of care, it is important to examine how current and former welfare recipients arrange child care for their young children. Using survey data collected in 1997 (during the early phase of state implementation of federal welfare reform legislation), this paper provides a descriptive profile of the child care arrangements used by welfare recipients and other low-income families for their young children. Specifically, we address the following questions: (a) Who is caring for the young children (under 5) of welfare recipients? and (b) How do those arrangements differ, if at all, from those used by families who have left welfare or low-income families who have never received welfare?

Data for these analyses are from the 1997 National Survey of America's Families (NSAF). The NSAF was conducted under the Assessing New Federalism project, a multiyear research effort at the Urban Institute and Child Trends to monitor and understand how shifts in federal policy affect states and the families who live there. The NSAF is a nationally representative survey of the civilian, noninstitutionalized population under 65 and their families. The survey collected economic, health, and social characteristics for 44,000 households. Although states may have solidified or modified their welfare policies since 1997, the NSAF provides an important first descriptive look at child care arrangements after federal welfare reform legislation was passed in 1996.

In this paper, we focus on children ages 0-4. We examine three dimensions of child care: the types of arrangements, the number of arrangements, and the total number of hours spent in nonparental care. Five types of child care arrangements are identified: (a) center-based care, (b) family child care (care by nonrelatives outside the child's home), (c) relative care (in or outside the child's home), (d) nannies/babysitters (care by nonrelatives in the child's home), and (e) parent care (no nonparental arrangement reported). Analyses address whether the characteristics of child care arrangements differ for low-income families with different histories of welfare receipt and participation in employment or educational activities. Child care characteristics are described separately for children of different ages (0-2 years vs. 3-4 years).

The results show that in 1997, current welfare recipients were less likely to use nonparental care for their infants and toddlers than recent welfare leavers and other low-income parents. Nevertheless, just under half of current welfare recipients (45%) used some form of nonparental child care, usually relative care (25%), for their infants and toddlers. In contrast, recent welfare leavers were most likely to use center-based care for their infants and toddlers. For 3- and 4-year-olds, center-based care was the most commonly used form of care, regardless of their parent's welfare status. Recent welfare leavers were more likely than other low-income families to use relative care for 3- and 4-year-olds. Even when their parent was not employed, about 50% of all 0- to 4-year-olds spent time in nonparental care (between 5 and 10 hours per week). Employment and welfare status were not associated with the number of arrangements used for 0- to 4-year-olds. Data from the 1999 NSAF will be available shortly to examine whether and how these patterns have changed.

Welfare Reform and Head Start Mothers

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PRESENTERS: Kimberly G. Browning, Michael S. Spencer

With the recent wave of welfare reforms, the receipt of public assistance in lieu of employment is becoming less common. Work mandates, time limits, and heightened use of sanctions all point to shifts in family income level, employment activity, and welfare use for families receiving public aid. Yet, little is known about how such shifts will affect family well-being in Head Start families.

In 1994, Michigan implemented the "Work First" program requiring recipients of cash assistance to either work, receive education and/or training, or volunteer for at least 20 hours per week in order to remain eligible for benefits. This paper addresses differences between Head Start and non-Head Start mothers experiencing welfare reform using data from a recent survey of 668 mothers receiving public assistance in the three-county Detroit, Michigan area. It looks at demographic and personal characteristics, employment status, barriers to employment, social support, and life history.

This survey, titled the Mother's Well-Being Study (MWS), was supported by the National Institute of Mental Health (NIMH). Data were collected between May and November of 1999. The MWS was a face-to-face interview that addressed a broad range of factors (including health, mental health, welfare status, child care, and family life) that affect work and other productive social roles. The current study included 232 families. Forty-six percent of the families had children in Head Start. The average age of mothers was 28.6 years. About half of the mothers did not graduate from high school or receive their GED. Sixty-two percent of the mothers were African American, 34% White, and 2% Other (including Native American and Latino).

Preliminary analyses of the data indicate that the work and welfare experiences of Head Start families were similar to non-Head Start families. Overall, about two thirds of the mothers were currently working and nearly two thirds looked for work in the past year. On average, mothers worked 35 hours per week and about half worked at least some evenings. Mothers received welfare for 5.7 years on average, and about half of the mothers grew up in a family that received welfare. No differences were found between Head Start and non-Head Start mothers on their experiences with family drinking and or drug problems, experiences with discrimination, and availability of social support. However, differences were found in the amount of time traveled to work (24 minutes for Head Start mothers compared to 41 minutes for non-Head Start mothers) and whether mothers received a failing grade in school (twice as many Head Start mothers compared to non-Head Start mothers).

The results highlight the increasing emphasis on work and need for flexible and affordable child care services for welfare families. Full-day Head Start programs with before and after school care would be necessary to meet the needs of mothers who work long hours and have long commutes. Finding ways to meet the need for evening and weekend child care should also be considered. Additionally, Head Start must develop flexible and creative ways for working parents to remain involved in their children's education.

Welfare Reform and Its Impact on Children and Their Families

Jing Babb

PRESENTER: Jing Babb

In January 1995, the concept of "Contract with America" was introduced to the House of Representatives (Committee on Ways and Means, 1995). The "Personal Responsibility and Work Opportunity Reconciliation Act" was signed into law in August 1996, and a new welfare program called TANF (Temporary Assistance to Needy Families) was created to replace the AFDC (Aid to Families with Dependent Children). Children's issues were found to be the most crucial topic during the process of redesigning the system (County of San Diego, 1997). Because of the complexity involved in these issues, it has presented a tremendous challenge to the reform process.

The care of young children has been an issue that has not been properly addressed throughout the entire history of welfare (Cammisa, 1998). After the welfare reform law went into effect on July 1, 1997, 400,000 new families were expected to go to work. Due to the lack of quality, affordable, and accessible child care, it then became an even bigger issue (U.S. Department of Health and Human Services, 1995).

Research showed that many people who leave welfare to earn minimum wage eventually return back to the system due to the lack of child care subsidies (Greater Minneapolis Day Care Association, 1995). Inadequate resources not only cause further decline in the quality of care for low-income children and families, but also impact the entire family and child care systems due to the lack of services for families and providers.

According to the Department of Social Services, there was a large increase of 129,000 working mothers who joined the workforce in the year of 1998. This fact, however, did not affect the poverty rate of children (Children's Defense Fund, 1999). A recent study by Aber (2000) showed that low-income women who are in the welfare program often have higher rates of substance abuse, domestic violence, and depression. Loss of income or support may result in an increase in families being unable to provide basic needs for their children, causing neglect, homelessness, and/or abuse. Research also showed that the quality of care for children not only has tremendous impact on their brain development, but also physical and emotional development (Shore, 1997).

All the above studies showed that children's issues are critical for the success of welfare reform. It is essential for state and local authorities to address the needs of children, in order to help their parents' transition from welfare to work. Without addressing the needs of children, welfare reform will remain a stumbling block for both parents and society. It is the responsibility of the educators to study this issue, and explore the possibilities of improving and restructuring the welfare system, to ensure our children a quality education environment.

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How Low-Income Mothers Select Child Care

James Mensing, Desiree French, Bruce Fuller, Sharon Lynn Kagan

PRESENTERS: James Mensing, Desiree French

Although center-based programs like Head Start and vouchers intended to broaden child care options have grown substantially in recent years, most low-income women—be they in the ranks of the welfare-poor or the working-poor—still select kin members, babysitters, and boyfriends to care for their children (Fuller, et al., 2000). A growing number of quantitative studies are emerging that identify how family or maternal attributes help to explain the types of child care selected by working mothers. For example, we have learned that maternal education, ethnic membership, household income, parenting beliefs and practices, levels of social support, the focal child's age, and the number of siblings all influence the likelihood that parents select center-based care (Fuller, Holloway, & Liang, 1996; Singer, Fuller, Kelley, & Wolf, 1998; Fuller, et al., 1999). We also know, at an organization or neighborhood level, that the simple availability of centers and preschools, widely unequal across states and low-income communities, conditions the influence of family-level determinants (Holloway & Fuller, 1999). However, this earlier work falls short in two ways. First, we have limited qualitative evidence on how women themselves view their options and the criteria that they consider in their selection process. Second, the field remains undertheorized: We have only partial explanations for the kinds of child care "choices" that parents, be they middle-class or low-income, are likely to make under local conditions.

This paper reports on low-income mothers' reasoning about the kinds of child care they were selecting over a 15-month period. All women had entered a new county welfare program in California; all were eligible for subsidized center-based slots or vouchers to reimburse kith or kin caregivers. Our analytic goal was to explore mothers' own criteria for selecting child care providers, often involving a sequence of different caregivers over a period of several months.

In one sense, our paramount finding was not surprising: A mother's feeling of trust with potential providers, and the perception that their toddler or preschooler would be safe, was the common thread that ran across this small sample of women. We advanced a new conceptualization of selection that focused on this clear finding, then illuminated secondary criteria that women talk about once their first condition is met. For example, we reported how these mothers actually think about what professionals would call, "school readiness." Some women worry about their toddler spending too much time passively watching television. Others consider the provider's flexibility in terms of the hours that they work or their ability to provide transportation. However, this second level of criteria is only invoked in the minds of these women once they feel a more basic level of trust with the potential child care provider. This holds implications for how the early childhood field, including policy makers and program architects, consider the influence of formal information and voucher-like incentives aimed at widening child care options.

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Child Care Arrangements of Head Start Participants and Nonparticipants

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Interest in child care for low-income families has intensified, due in part to reforms in welfare and to research findings about the benefits of early childhood education, which often is combined with child care programs. Government programs such as Head Start find a prominent place in the middle of these debates. With the push to move welfare recipients into employment, the demand for programs such as Head Start will likely increase. However, little is known about the characteristics of children who participate in Head Start and those children who are eligible for Head Start but do not participate.

Using data from the Survey of Income and Program Participation (SIPP), conducted by the U.S. Census Bureau in Fall 1995, this poster compared demographic characteristics, participation in government assistance programs, and types of child care arrangements used to care for 3- and 4-year-olds living in low-income families (185% of poverty or lower). This higher cut-off level was chosen because poverty may be a transitory condition for many children at the margin and may better represent a pool of children "potentially eligible" for Head Start.

In sum, Head Start participants were more likely than nonparticipants to be living with a parent who had never married, and less likely to be living in a married couple family. They were also more likely to be living with a nonemployed, single parent than nonparticipants. Higher proportions of nonparticipants lived with married parents with one or more parent employed than participants. Head Start participants were more likely to be non-Latino Black than were nonparticipants.

Higher proportions of Head Start participants than nonparticipants lived in families that received government assistance (any receipt of AFDC ; Aid to Families with Dependent Children,

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WIC, Foodstamps, or general assistance). Head Start families were much more likely to receive AFDC (50%) than nonparticipant families (29 %). Even when considering families living in poverty, more Head Start participants received government assistance than nonparticipant families. This finding suggests that families with children participating in Head Start programs may be better connected into networks of assistance and more aware of programs available to low-income families.

Head Start participants tended to use more child care arrangements per week than nonparticipants, and they spent twice as many hours in child care per week in all of their child care arrangements combined than did nonparticipants. Although participants and nonparticipants were cared for by relatives to a similar extent, nonparticipants were more likely to be cared for by nonrelatives (excluding Head Start and school) than were participants. Among low-income families, 19% of nonparticipants were in nursery or preschool compared with 3% of Head Start participants.

This difference suggests that some low-income families may seek educational and school-readiness programs for their children through participation in organized child care facilities if Head Start programs are not available, or they may choose other types of arrangements instead of Head Start.

A Study of Infant Care Under Welfare Reform

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Results from an overview of the policies across the states that require parents of infants to work were discussed. In addition, information from site visits to eight communities in which parents of infants are required to work in order to receive cash assistance were presented.

(Abstract from program; poster summary not available for publication.)

Impacts of Welfare Reform on Young Children, Families, and Communities

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The inception of Early Head Start (EHS) occurred at almost the same time as the passing of welfare reform. The Personal Responsibility and Work Opportunity Reconciliation Act (PRWORA), was passed in August 1996 and took effect on July 1, 1997 (Committee on Ways and Means, U.S. House of Representatives, 1996). This was the latest reform of the welfare system and is the most drastic and far-reaching reform of this system since its inception in 1935 (Moffitt & Ver Ploeg, 1999).

Numerous previous studies have examined the effects of welfare usage (Elliot, 1996; Oliker, 1995; Seccombe, James, & Walters, 1998). This study examined the repercussions of the legislation of the 1996 welfare reforms on young children, their families, and their communities. The purpose of this study was to determine how welfare reform is being implemented in urban and rural communities with EHS and to determine the effects of these public policy changes. Additionally, we sought to determine the effects of public policy changes on the EHS programs themselves and to understand how the programs moderate the effects of public policy changes on the families they serve.

The qualitative portion of this 2-year study uses a "backward chaining" strategy to explore how perspectives of welfare reform implementation may change or evolve from state level policy makers to families transitioning off cash assistance. Key components to understanding the community context are: (a) a focus on the resources and barriers to obtaining and retaining employment, and (b) comprehending the urban and rural impacts of welfare reform. Focus groups and interviews were designed to address issues that influence the success of welfare reform such as the economic conditions, employer participation, child care availability, literacy and job training, and the resources and cooperation of the entire community of public and private human service programs.

Respondents were asked to furnish their perspectives on welfare reform policy goals, implementation strategies, and barriers/resources to implementing various programs. Data from the 1st year's interviews have been analyzed and reveal the barriers and resources that families face as they transition from welfare to work and move towards self-sufficiency. Some barriers that have been found include transportation issues, limited availability of high quality child care in both urban and rural communities, low education levels, and limited work history among those who are on welfare or who have transitioned off welfare. Several resources that have contributed to successful transitions from welfare to work leading to self-sufficiency have been found, including: (a) the availability of child care subsidies, (b) EHS staff who have helped families to negotiate the social services system, and (c) GED classes available through EHS for parents without a high school diploma.

The information and insight uncovered through this study will be shared and discussed nationally. This information is of critical value to a number of stakeholders including those who will focus on welfare reform reauthorization and state policymakers and administrators who will be forced to make dramatic adaptations to meet ensuing requests of the federal Personal Responsibility Bill over the next 2 years.

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American Public Human Services Association
American School Health Association
American Sociological Association
American Speech-Language-Hearing Association
Association for Childhood Education International
Association of Black Anthropologists
Association of Hispanic Mental Health Professionals
Association of Maternal and Child Health Programs
Association of Teachers of Maternal and Child Health
Association of Teachers of Preventive Medicine
Child Welfare League of America
Council for Exceptional Children, Division for Early Childhood
Council on Anthropology and Education
ERIC Clearinghouse on Elementary and Early Childhood Education
Family Resource Coalition of America
Federation for Children with Special Needs
International Society for Infant Studies
National Alliance of Business
National Association for the Education of Young Children
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National Association of School Psychologists
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